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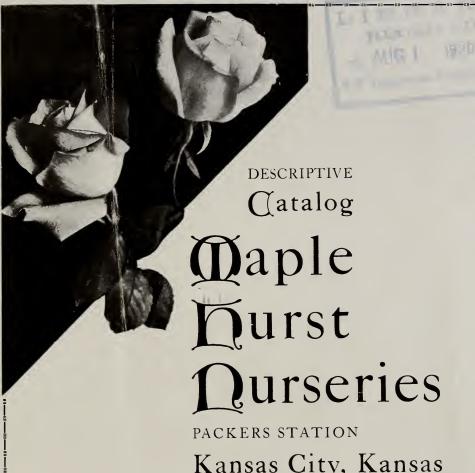
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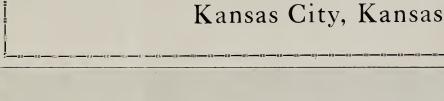


RETURN TO POMOLOGY SECTION OF NOMENCLATURE.

MAY 3-1916

INDEXED.







Spraying Formulas

SPRAYING THE APPLE

All plants have their insect and fungous enemies. The apple has its share of them, but these may be easily controlled by spraying. While it is attacked by many different insects and fungous diseases, each of which takes its toll, the fruit growers, as a rule, need pay attention to but two pests, i. e., codling moth (apple worm) and apple scab. When controlling these two pests with sprays, practically all others are incidentally held in check. One of these is an eating insect and must be fought with an arsenic poison. The other is a fungous disease, and must be controlled with a fungicide or germ destroyer. But generally, both materials are needed at about the same time, and they are combined and applied as one spray. Some fruit growers use them separately, but many of the most successful growers use the combination spray for all applications. While occasionally a small amount of material may be wasted by this method, it is the safest procedure.

FOR INSECTS THAT CHEW

The most common and best form of arsenic used is "arsenate of lead." This may be secured from drug stores and seed and garden supply houses. Paris green may be used if arsenate of lead cannot be obtained, but it is not as desirable. It is more liable to burn the leaves and fruit if applied too strong, and also washes off more easily by rains, making it effective for a shorter period of time. These poisons should be prepared as follows: Thoroughly dissolve three pounds of arsenate of lead in a gallon of water and dilute to 50 gallons, either water or other spraying solution, or 4 ounces of Paris green in small amount of water, and add to same amount of water or solution. If Paris green is used with water alone, it is best to slake 2 to 3 pounds of quick lime and add to each 50 gallons. This neutralizes to some extent the burning effect of the Paris green and also helps to hold the fine particles of poison in suspension. These poisons are effective against chewing insects, only.

' FOR FUNGOUS DISEASES

For the fungous diseases Bordeaux mixture or lime-sulphur solution may be used. Bordeaux is prepared by dissolving 4 pounds of copper-sulphate (bluestone) in a small amount of water and diluting to 25 gallons; slaking 5 to 6 pounds of good lime and adding water to make 25 gallons. These solutions should then be combined by pouring or dipping simultaneously from each into a third vessel or spray tank.

The commercial lime-sulphur is a very good fungicide and is used almost exclusively by many fruit growers. It is diluted 35 to 40 times for summer spraying. This may be obtained from same sources as arsenate of lead or direct from manufacturers. To combine the fungus spray and the insect spray, simply add the dissolved poisons to the fungus solutions.

First Application.—This application should be made just after the cluster buds open, but before the individual flowers open or when the trees begin to appear pink. It is directed mainly against apple scab, which is a fungus and the principal part of the spray material should be Bordeaux or lime-sulphur. It is safest, however, to use the combination spray with the arsenate of lead added. This application should be thorough and be directed mainly against the trunks and main limbs. It is the most important application against apple scab.

Second Application.—This application should be made immediately after the petals fall. It is the main application against the codling moth (apple worm). It is important to make this application at the proper time. Direct the material downward as much as possible to fill all calyx cups which point upward at this time. Use the combination material, but be sure to have the right amount of arsenate of lead included, as this is the important part of the solution for this application.

Third Application.—This application should be made from 7 to 10 days after the second spraying. It is applied to reinforce the former application against the numerous little apple worms that appear about this time, and to cover all new growth which is coming out very rapidly during this period. Use the same solution as for the second application.

Fourth Application.—If the former applications have been very thorough and effective, this application will not be necessary. It is directed mainly against the second brood of codling moth, which will appear if any escaped former applications. Most commercial growers make this application without fail, however. The same mixture as for former applications with the strength of fungicide reduced one-third, should be used. This application should be made about the 10th of July.



This catalog has been prepared with the intention of giving you brief, yet dependable descriptions and illustrations from photographs showing the results that may be attained. Our stock is carefully selected, and grown under conditions which produce a healthy, vigorous tree, adapted to North, South, East and West. Packing is done with the greatest of care, and in a thorough manner, so that we ship long distances with perfect safety. It is our constant aim to give you your money's worth in good stock, well grown and well packed. When purchasing of us you deal direct with the nursery and pay no agents' commissions, as we employ no agents. On this basis we solicit your business.

How to Order

Just make a list of what you want, giving number, size and price. Tell us whether to ship by freight or express, or to use our judgment. Nursery stock takes a special express rate, 25 per cent less than merchandise rates, and we recommend express for light shipments. If you wish shipment at some special date, tell us. If they can be conveniently obtained, remit by Money Order or Bank Draft. Goods will be sent C. O. D. when half the amount is sent with order. Stock ordered reserved for future shipment should be accompanied by one-third the amount, balance at shipping time. The freight or express charges are borne by the purchaser, who then knows he is paying only the railroad's charge for transportation. In case of shortage or error of any kind, please report promptly on receipt of goods, while the details are fresh in mind and adjustment easier.

Write name and postoffice plainly; if freight or express office is different from post-office, tell us.

Grading

We grade carefully, in some cases by caliper (or diameter), in others by height. When by both, the caliper governs, and the height stated is approximate. It is impossible to grade all varieties to a uniform size by both caliper and height, as some naturally grow tall, while others are shorter and heavier. Caliper is considered the best measure of value of the larger sizes. The lower number is included, the higher excluded. For example, 4 to 5 feet includes those trees ranging in size from 4 up to 5 feet.

About Substitution

When this catalog is printed we are prepared to accept orders for all varieties quoted, but as it is impossible to foresee the demand, some varieties become exhausted, particularly late in the season. Often customers prefer that a similar variety be sent, rather than lose a year in planting. If you do not wish us to do so, write "No Substitution" on order. We prefer that you tell us, otherwise we are obliged to use our judgment. Substitution, as we use the word, means simply that one variety is sent in place of another, correctly labeled with the name of the variety sent. For example, if Mayflower peach was sent in place of Alexander, it would be labeled Mayflower.

INSPECTION—Our Nursery is inspected each year, in accordance with the state laws, and each shipment is accompanied by a certificate of nursery inspection.

GUARANTEE—While we exercise great care and diligence to have our varieties true to label, and hold ourselves in readiness, on proper proof, to replace any that may prove otherwise, without charge, or refund the amount paid for same, it is mutually understood and agreed between the purchaser and ourselves that this covers the full extent of our guarantee or responsibility.

There are so many conditions over which we have no control—many of which no one can control—that it is impossible to guarantee stock to live, success or failure depending largely on climatic conditions, planting, after care, etc. Occasionally we learn of nurseries that do, but it will be found that the prices more than cover the risk run.

You are invited to visit our nurseries. We will be glad to show you around.

We have a large number of Trees, Shrubs and Plants that we could not list on account of space, so if there is anything you want and it is not listed in this catalog, write us your wants.

LOCATION—We are three miles from Kansas City, the largest railroad center west of Chicago, so are in position to get your order to you with fewer transfers than any other house in the country.

PARCEL POST—Heretofore it has been a problem for the person living at a distance from the railroad to get a small order without a lot of trouble and expense, the value of the order considered. Since March 1, 1914, nursery stock has been included in the regular parcel post mailing, and now 20-pound packages can be sent to any point in the United States, and 50 pounds to any point within the second zone.

CLUB ORDERS—We employ no agents, but will be glad to have you get up a club among your neighbors, and on orders amounting to \$10.00 or over, you may add stock to the value of 10 per cent of your order, and on orders amounting to \$25.00 you may add 15 per cent, if your order reaches us by March 1st. After March 1st, you may add 5 per cent on \$10.00 orders, or 10 per cent on \$25.00 orders. No extra stock will be allowed on orders reaching us after April 1st. This is an extra inducement to order early, as the early orders invariably give the best results. We prepay the freight on these club orders.

How to Order By Parcel Post

Our shipping point is in the same zone as Kansas City, being only four miles distant from the Union Depot. If in doubt, where you are close to a zone dividing line, call up your postmaster and he will tell you the zone with reference to Kansas City.

No package can be sent by parcel post where the length and girth combined is over 72 inches. In taking these measurements, the length of the bundle is taken from tip to tip. Then the measurement around the bundle is taken at its thickest part. Trees larger than the three or four-foot grade, therefore, cannot be sent by parcel post unless cut back severely, and only a few of these, as the limit of measurement is soon reached with trees of this size.

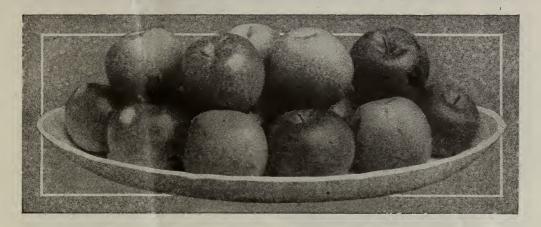
If a number of articles are wanted where two or more bundles or boxes are required, orders should be given for shipment by express, as this will be cheaper. However, where the purchaser is a long distance from express or freight office, shipment by parcel post may be more convenient.

Number of Trees and Plants on An Acre at Various Distances

]	l foot by 1	foot	43, 560	5	feet	by	5	feet1,	740
2	2 feet by 1	foot	21,780	6	feet	by	6	feet	210
2	2 feet by 2	feet	10,890 .	8	feet	by	8	feet	680
6	3 feet by 1	foot	14,520	10	feet	by	10'	feet	435
	3 feet by 2	feet	7,260	12	feet	by	12	feet	302
6	3 feet by 3	feet	. 4,840	15	feet	by	16	feet	19 3
4	feet by 1	foot	10,890	16	feet	by	16	feet	170
4	feet by 2	feet	. 5,445	18	feet	by	18	feet	134
4	feet by 3	feet	. 3,63 0	20	feet	by	20	feet	108
4	feet by 4	feet	. 2,722	25	feet	by	25	feet	69
Ē	feet by 2	feet	. 4,356	3 0	feet	by	30	feet	49
į	feet by 3	feet	2,904	33	feet	by	20	feet	66
				33	feet	by	33	feet	40

Care of Stock When Received From Nursery

As soon as the trees and plants are received, the bundles should be opened, removing all straw and packing. The roots should be thoroughly sprinkled, then heeled in very moist ground, so that the mellow earth, tamped solid about them, will come in contact with the roots and thoroughly protect them from the air. Wet down thoroughly and cover wet soil with two or three inches of mellow earth. In planting, take up only a few at a time, and never allow them to lay exposed to air and sun.



Apples

When compared with the long list of varieties that many nurseries send out, our list looks small. It is possible to make any apple look nice by taking a picture of a carefully selected specimen, and by carefully working this over and giving it a little more color, a very beautiful plate can be made. Many of you have bought a tree by the picture in a plate book, and have been disappointed when the tree came into bearing. We have tried to avoid misrepresenting the varieties we have, and have cut out all varieties that do not do well in practically all parts of the Middle West. The varieties we have we consider the best from the different standpoints, such as early bearing, regular fruiting, freedom from scab, quality of plant and fruit and selling qualities.

Summer Apples

Early Harvest. A very popular early apple. Tree healthy and vigorous, living to an old age. Fruit of good size; color clear waxy yellow, sometimes with a pale blush cheek. Sprightly, sub-acid, good for dessert or cooking. Very productive. Ripens June or July.

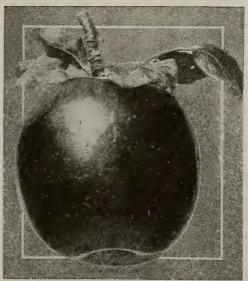
Yellow Transparent. An early summer apple of good quality. Tree upright in growth; bears at a very early age and is very prolific. Fruit medium in size; clear white, becoming pale yellow as it matures. Flesh is tender, juicy—splendid for dessert or cooking. Every home orchard should have a few of this splendid variety.

Red June. Tree moderate in size; upright grower; bears early. Fruit small, rather oblong. Color, brilliant dark red. Flesh white, tender and juicy. A splendid apple for dessert use.

Oldenburg (Duchess of). An apple of Russian origin, considered of particular value in the North. Tree moderate grower and an abundant bearer. Very hardy. Fruit medium in size, surface smooth, waxy yellow in color, with splashes of red. Flesh white, tender, juicy and sub-acid. A splendid variety for cooking.

Fall Apples

Wealthy. An apple valuable for cold climates, as it is very hardy. Comes into bearing young. A splendid bearer. Fruit dark red in color, of good size, smooth and



Red June



Jonathan

always highly colored. Flesh tender and juicy. Verey fine for home use or market. Ripens in September. Every orchard should have some Wealthy trees.

Maiden Blush. Tree large and spreading. Fruit large, smooth and of splendid appearance. Yellow in color with an evenly shaded red cheek. Pleasant sub-acid flavor. Yields abundantly. Ripens in August and September.

Bailey Sweet. Tree large and rather upright in growth. Vigorous grower and productive. Fruit large, striped deep red; mild, rich flavor. This is a good sweet apple, both in point of productiveness and quality.

Rambo. Medium size. Fruit streaked with dull red and somewhat dotted. Tree vigorous and productive. Ripens Septem ber and October.

Huntsman. Late fall. Tree spreading and vigorous. Fruit golden yellow with bright red cheek. Fine flavor. Inclined to scab unless sprayed. Moderately productive.

Jonathan. One of the very best apples grown. Makes large, spreading tree, vigorous and very productive. Fruit large, waxy yellow, generally well covered with a bright red. Flesh yellow, tender, juicy and melting. Excellent for table, cooking and market. We unhesitatingly recommend this apple as the standard of excellence.

Grimes (Golden). A transparent golden yellow apple of good size and exceptional quality. Tree strong in growth and some-

what spreading. Fruit medium to large. Flesh yellow and firm, rich and spicy to the taste. Always commands good price on the market. You should have some Grimes Golden in your orchard.

Winter Apples

Delicious: A large, beautiful and, as named, very delicious apple. Tree upright in growth and very healthy. Fruit large in size, of good color and the best in quality of any apple now grown.

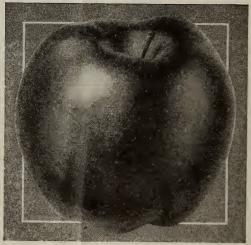
Ben Davis. Tree healthy, vigorous and a good cropper. Fruit large, round and smooth, of good color and splendid keeping qualities. One of the best winter cooking apples. Much planted by commercial growers because of its consistent bearing properties.

Ingram. Tree upright in growth. Fruit resembling Janet, of which it is a seedling. Medium in size, color dull green, striped with red. A good keeper and of great value, particularly in the Ozark region. (Mr. L. A. Goodman, president of the American Pomological Society, considers this one of the very best winter apples.)

Arkansas Black. Tree comes into bearing young. Adapted to planting in the Southern states. Fruit dark red, almost black. Flesh rather coarse, but a good keeper.

Black Ben. An apple of the Ben Davis type. Tree and fruit similar to Gano. Is often mistaken for Gano, which it resembles in shape and color, but is a solid red, whereas Gano is inclined to show red stripes. Much preferred to Ben Davis and Gano by many growers.

Gano. An improved Ben Davis, resembling it in habit of growth, hardiness, size,



Delicious

shape and flavor. Color a darker red, and often with an almost imperceptible stripe. Its bright red color makes the fruit a good seller.

Missouri (Pippin). Tree upright in growth. Comes into bearing early. Produces enormous crops of medium to small apples. Fruit rich, bright red, sometimes splashed with yellow. Quality medium. A good keeper.

Janet. Size medium to large. Color green with faint red stripe. Season, November to May. This is the old-time Janet that everyone likes in later winter. Very crisp and juicy.

Mammoth Black Twig (Paragon or Arkansas). Fruit large, round, dark red, almost black when fully matured. Tree a vigorous grower and productive.

Rome Beauty. Tree thrifty, upright grower. Fruit large to very large. Surface smooth. Color pale yellow, striped with red, making it a very handsome apple. Desirable for market on account of its productiveness and fine appearance. Comes into bearing early, yielding fruit uniform in size, fine in appearance and of good quality.

Stayman Winesap. Tree hardy, vigorous and spreading and an abundant bearer. Fruit dark, rich red lightly striped. Flesh is firm, crisp and juicy. Tree a stronger grower than the Winesap, and is successfully grown over a wide range of territory. A splendid apple that should be in every orchard.

Winesap. An old favorite. Tree spreading. Fruit medium in size. Color dark red. Fine in quality and a good keeper.



Stayman Winesap

York Imperial. One of the most highly productive apples. Tree large; fruit large to very large. Color greenish yellow, nearly covered with bright red. Quality good; very firm and a splendid keeper. We consider this the most profitable apple we have ever grown.

Crab Apples

Hyslop. Tree upright, hardy and vigorous. Fruith large and smooth. Dark, rich crimson in color. Popular because of its size and beauty.

Transcendent. A beautiful variety of the Siberian crab. Tree very ornamental; large and of brightt green foliage; blossoms much larger and more ornamental than on any other apple tree. Fruit is yellow, partly covered with red; medium in size; flavor pleasant and agreeable.



Transcendent Crab



Peaches

Look over our list and see if you can beat it. There are other good varieties, of course, but see if we do not have the best from early to late. White peaches, yellow peaches, freestones, clings, all the varieties that bear and cause you to be pleased with them on the table, in the jar or in the basket to take to market. For home use we do not recommend any of the extra early varieties. They are generally insipid semi-clings, and for the most part wormy. We recommend for home use Greensboro, Champion, Elberta, Oldmixon Free, Oldmixon Cling, Salway, and Heath Cling. For market the extra early varieties are generally profitable, such as Alexander and Mayflower.

Mayflower. Free. Originated in North Carolina. Very early, hardy. Color bright red, and very prolific.

Alexander. Semi-free. Season extra early, medium in size. White with bright red cheek. Prolific,

Greensboro. The earliest good peach, white with bright red cheek, good size; productive and of good quality. July.

Family Favorite. White freestone; medium early. One of the best peaches for flavor and productiveness. Ripens between Carman and Champion. For home use or market Family Favorite cannot be excelled in its season.

Mountain Rose. A large red peach with flesh rich, juicy and excellent; one of the best early peaches. July.

Carman. Cream white with deep blush, one of the hardiest, above medium in size and of good flavor. One of the best early varieties. July.

Belle of Georgia. One of the hardiest trees in bud, it is of great value. If there are peaches the Belle of Georgia will be the variety that comes through in the best shape. Ripens before Elberta. Its color is white, with a red blush on the sunny side. Almost round, slightly oblong. One of the best flavored of all the peaches, and is to the white peaches what the Elberta is to the yellow varieties. Very productive. This variety is recommended by the Agri-

cultural College at Manhattan, Kansas, and by the State University at Columbia, Mo., for these two states.

Champion. One of the best flavored of all peaches; large, white, with red cheek, hardy; should be in every list. August 1.

Elberta. The general favorite; large yellow freestone, red cheeked and firm. Stands shipping best of all, and is a universal favorite for canning and preserving. August 15th.



Elberta

Oldmixon Free. Large white peach with red cheeks; one of the best table peaches; we regard this as one of the best varieties. August.

Oldmixon Cling. One of the best clings; large and very rich, bright red cheek. August.

Crawford's Late. Large yellow freestone,

fresh yellow; productive. August and September.

Salway. Large yellow freestone, the the best of the late peaches; flesh firm and rich; productive. September and October.

Heath Cling. One of the best clings; large and very rich; bright red cheek. August.

Cherries

The cherry is probably the most profitable of all the tree fruits to the fruit-grower. This popular fruit always commands a good price, bears regularly, being very hardy in buds; is long lived and is always in demand either for market or home consumption. We recommend for home use or market purposes the following proportions: 40 per cent Early Richmond, 40 per cent Montmorency, 20 per cent English Morello. This applies to the Middle West only. In these states the sweet cherry is not a success, and we do not advise planting in large quantities, as the tree is short-lived and does not bear regularly.

We have cut out many varieties that have not been of value in the Middle West. Dyehouse is practically identical with Richmond and Wragg is so nearly like English Morello that experts cannot distinguish them. We therefore do not list Dyehouse or Wragg.

Wood (Governor). Very large, light yellow marbled with red; juicy, rich and delicious; tree is healthy.

Richmond (Early). The best of the early cherries; good bearer, and an early bearer; tree vigorous and healthy; fruit of medium size, dark red when fully ripe, melting and juicy. Last of May and first of June.

Montmorency. Follows the early Richmond in the season, and is fully equal to it in its good qualities; stem longer than the Richmond; color somewhat lighter; tree very ornamental. June and July.

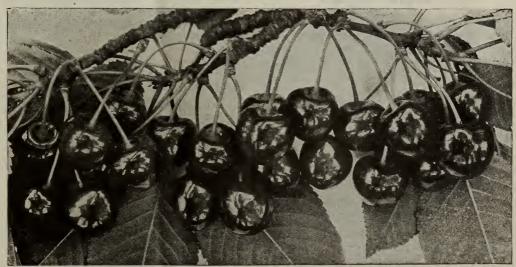
Morello (English). Tree is a moderate grower, bears early and regularly, fruit very dark, nearly black when fully ripe; prolific. July.

Compass Cherry Plum

A cross between the Sand Cherry and Miner Plum. Very hardy and successfully grown North and South. Particularly adapted to the parts of the country where rainfall is not abundant. When green the fruit resembles the plum, but as it ripens, becomes round like the cherry. Bears young and abundantly.

Heart and Bigarreau Cherries

Black Tartarian. Very large; bright purplish black; juicy, very rich, excellent flavor; half tender. Productive. Vigorous. First of June.



Montmorency



Conover's Colossal

Asparagus

Barr's Mammoth. The stalks are very large, frequently an inch in diameter, and have close round heads. They are quick growing, tender and succulent, entirely free from woody fibre.

Columbian Mammoth White. Gives immense yields of large white roots; shoots remain white without earthing or artificial blanching, as long as fit for use. A distinct and valuable variety.

Conover's Colossal. A well known standard variety, very large, strong shoots of excellent quality; not as clear white as Mammoth White, but preferred by many.

Palmetto. A very early maturing and prolific variety, producing an abundance of very large, deep green shoots of the best quality.

Quince

The Quince is of late attracting a good deal of attention, both for home and market purposes, because of its many uses, such as canning, preserving and for flavoring other fruits, and because of its commercial value on the markets. It flourishes in any good garden soil, but well repays special and careful cultivation.

Apple or Orange. Large, roundish; bright golden yellow; cooks tender and is of excellent flavor. The tree is very productive. Valuable for preserves or flavoring. September.

Champion. Originated in Connecticut. The fruit averages larger than the Orange, more oval in shape, quality equally fine and a longer keeper. The tree is very prolific and a constant bearer. Vigorous. October and November.

Nectarines

A most delicious, smooth-skinned fruit, which thrives wherever the peach will grow. Liable to be stung by the curculio, and requires the same treatment as plums. Commands a high price in the Eastern markets, as it is considered somewhat of a novelty.

Boston. Large; deep yellow, with a bright blush and mottlings of red; sweet and peculiarly pleasant flavor; freestone. The tree is hardy and productive. One of the most valuable varieties known. Vigorous. August.

Red Roman. Large; greenish yellow with a dark, dull red cheek; flesh yellowish, fine and rich. Productive. Vigorous. September.

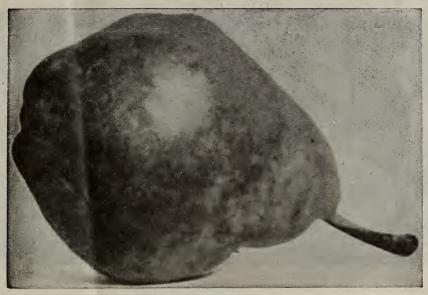
Apricots

The Apricot is one of the most beautiful and delicious of fruits of the plum species. It ripens very early, which makes it of great value. It is liable to the attacks of the curculio and requires the same treatment as plums.

Early Golden. (Dubois.) Small; pale orange; juicy and sweet. Hardy as the Russian and productive. Vigorous. First of July.

Moorpark. One of the largest. Orange, with a red cheek; firm, juicy, with a rich flavor. Very productive. Vig. July.

Russian. Its extreme hardiness and fine quality of fruit make it very valuable.



Bartlett

Standard Pears

Here again we have only a few varieties. We have planted about forty varieties, and after working with them for years, have had them blight, or bloom and fail to set fruit. We have listed only those sorts that have given results. And right here let us say that the one best variety for the Middle West is Kieffer. Maybe you do not like this pear, but it will outlive and outyield any other variety four to one. Generally speaking, dwarf pears in the Middle West will give the best results. Grafted or budded on quince stocks, they grow more slowly, are longer lived, bear earlier and do not blight so badly.

Garber. Valuable as a pollenizer for Kieffer variety. Fruit waxy yellow, too soft for shipment when fully ripe. Standard only.

Anjou (Beurre d'Anjou). We grow this variety in dwarf. One of the most profitable of the pears. Large and yellow. Of high flavor, whitish flesh, fine grained. Always looks good and is a good keeper. Ripens in late summer. Tree a good grower, vigorous and upright, hardy, pyramidal. Late bloomer. In dwarf produces generally the third year.

Kieffer. Large; yellow, tinged red. Tree very healthy and a strong grower. A remarkably heavy bearer. Little troubled with San Jose scale and seldom blights. Medium in quality, but a very profitable market variety. Standard only.

Seckel (Sugar Pear). The standard of excellence in the pear. Tree a stout, erect grower. Fruit small but of the highest flavor. Plant part of your home orchard to Seckel. Dwarf and Standard.

Bartlett. Probably the best known of all pears. Tree rapid growing and upright.

Fruit is large, smooth, color clear yellow. Flesh white, juicy and sweet. A delicious fruit. The one drawback to this magnificent pear is the tendency to blight. Dwarf and Standard.

Angouseme (Duchess.) Generally planted as a dwarf and is most valuable when so planted. Very productive. Fruit large to very large. Color, dull greenish yellow. Flesh juicy and of fine flavor. Dwarf only.

Mulberries

Downing. Very large, black and sweet. Tree a vigorous grower and productive.

Russian. Tree vigorous and very productive. Fruit small but very sweet. Plant a few trees and see the boys climb for them.

Persimmons

Very hardy throughout the country. The tree is a handsome ornamental tree, growing from 20 to 30 feet. Fruit not edible until fully ripe.



Plums

Nine-tenths of the varieties of plums listed have no place in the Middle West. Why give the room to trees that do not produce in your locality, or that are so small and inspid that they are worthless, if they do bear? Our varieties bear and are worthy of your attention.

Abundance. Tree upright. Fruit large and handsome. Color, lemon yellow overspread with bright red. A plum of fine flavor. One of the best Japanese varieties. July.

Burbank. Tree spreading, very prolific, plums hanging in ropes. Color, greenish yellow lightly splashed with red. July.

Shropshire (Damson). An European plum of fine quality, twice the size of the old Blue Damson, which it has almost superseded. Very productive. August and September.

Green Gage. Not recommended for commercial planting in the Middle West, as it does not bear with enough regularity in this section. Of high quality, splendid for canning and for dessert use. A valuable addition to the home orchard.

America. A new plum of the American species. Tree a good grower and fruits regularly and abundantly. Quality good. Color yellow with red cheek. One of the best, if not the best plum for the Middle West grower to plant.

Wild Goose. A vigorous, upright grower. Fruit is medium to large. Color, yellow,

richly shaded with red. Flavor rich and good. July.

German Prune. Very large plum of dark purple color. Very attractive and salable. Fine in quality but should be planted with discretion, as it does not succeed well in all places. August.

Lombard. Violet red. Medium in size, oval, juicy. Adheres to the stone. Tree vigorous and productive. A good market variety and excellent for home use. July and August.

Arkansas Lombard. An improvement on the Wild Goose and far superior in flavor. Fruit yellow, with red blush; flesh firm, meaty and luscious. Trees are vigorous and enormous bearers. Ripens two weeks later than Wild Goose. July.

Bradshaw. Very large; dark violet-red; flesh yellowish green, juicy and pleasant. Productive. Vigorous. Middle of August.

Shipper's Pride. Originated in northwestern New York, and has never been known to freeze back a particle in the coldest winters. The fruit is large, dark purple; flesh firm and of excellent quality. Splendid for shipping or market. Vigorous. First of September.

Nut Trees

During the past few years there has been a great increase in the planting of nut trees. All of the nut trees we list are hardy and these trees are all ornamental in addition to the value of the fruit. The food value of nuts has been shown to rank higher than any other class of food.

Chestnut

American Sweet Chestnut. One of the most valuable of our nut trees. Produces fruit when quite young and is very hardy. Very sweet and delicious for eating raw or roasted or ground up for dressing. Tree ornamental and one of the quickest growing of all the nut trees.

Walnut

English Walnut. For spring delivery only. Many have hesitated to plant this

nut, fearing that it was not hardy enough. It has been shown, however, that it is hardy in practically all parts of New York, also in Indiana and Illinois. One grower says "wherever the peach can be grown, the English Walnut will be successful." Every one likes the English Walnut.

White Walnut (Butternut). Hardy to the Dakotas. Nuts long, large, and very rich, always in demand.

Black Walnut. The walnut native to Kansas and Missouri and the other states of the Middle West. From selected seed.

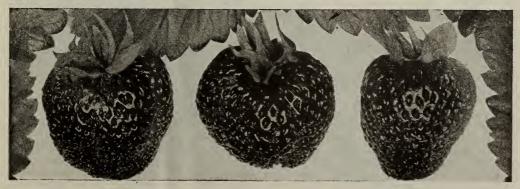
Strawberries

Set out strawberry plants as early as possible and cultivate thoroughly throughout the season. We advise planting 16 to 18 inches in the row, with the rows $3\frac{1}{2}$ to 4 feet apart.

With a good growing season varieties like Dunlap and Warfield will make solid rows if planted 3 to 4 feet apart in the row, but if two or three plants are lost in succession there will be a long gap in the row. With the low cost of the plant considered, we think it economy to plant closer and avoid these gaps. The above directions are for the matted row system of planting. This we consider the best and much more economical. You may be able to get larger berries by using the "hill" system, but it will cost more for labor, and the total yield will be less. We find the most advantageous way to plant, using the hill system, is to make beds 4 feet wide with a path about two feet between the beds. In each bed plant one foot each way and keep all the runnrs off of plants throughout the year.

Haverland (Imp.) A standard variety that is universally praised all over the country. It succeeds on all kinds of soil, and seems to be the least affected by frosts, often producing a full crop of perfect fruit when other varieties are badly damaged. It makes a large, stocky plant and sets just enough plants to make a perfect fruiting row.

Aroma (Per.). Perhaps the best market variety at present grown. Fruit is large, handsome, firm, of fine quality, and invariably smooth and free from defects. In addition to its other splendid qualities, the foliage while always sufficient, is never heavy enough to hide the berries from the pickers. It is one of the very best strawberries for home use, market and shipping.



Aroma

Klondike

Splendid



Dunlap

Gandy (Per.). A good late variety. This berry has been successfully grown all over the country. The plant is a strong grower; fruit large and very firm. Requires strong ground to do its best. It is a very desirable berry, on account of its lateness and firmness. It is the best shipper of all.

Splendid. (Per.). This variety is a great drouth resister. It is one of the hardiest berries and produces a large crop of fine looking berries. It is one of the best pollinators.

Dunlap (Senator) (Per.). A variety that seems to give general satisfaction all over the country. It is a perfect bloomer and extra prolific plant maker of medium sized plants; medium in fruiting season, ripening about the same time as Warfield and resembling that variety in color and shape of fruit.

Chesapeake (Per.). One of the very best late varieties. It averages larger than Gandy and succeeds over a wider range of soils. Uniformly round. Color dark rich scarlet. This variety makes only a moderate number of runners and should be well cutivated throughout the season to force a good plant growth.

Gibson (Per.) This berry commences to ripen with the Dunlap and continues well into the season of the later varieties, which is an indication of its very strong vitality. Fruit stems are large and strong, and its foliage affords protection for its blossoms and fruit. Color rich red, and the meat of this variety is red also. Fruit large and maintains its size well throughout the season.

Klondike (Per.). One of the best of the early berries, and one of the most profitable. Planted extensively throughout the country for the early market. Very firm, it is the ideal shipping berry. Color rich, blood red. The plant is a vigorous, heavy grower, with light green foliage, and with sufficient foliage to protect the berries from the sun. The berry is very productive and is a good plant maker. Succeeds best on a warm sandy loam.

Luther (August) (Per.) Well known standard early market variety. More desirable than Excelsior with us, has a better quality, large average size and ripening more berries early in the season. A good grower and reliable. Fruit large, glossy bright red, firm and good quality.

Warfield (Imp.). This is perhaps the most universal favorite of all the strawberries. It has good color, hardiness, productiveness and quality combined and this with the fact that it makes a great number of plants, makes it a general favorite. The berries are fair and uniform in size, very dark, waxy red, firm and beautiful; the plant is a clean, healthy, vigorous grower, sending out numerous runners, and making a thick matted row. Can be grown on bottom land, hillside or hilltop on rich soil, or poor soil. Plant part of your patch to Warfield.

Bubach. (Imp.). Very large; mid-season to late. Color bright red; very prolific. One of the best varieties for home use or market. A popular variety and always in demand.

Fall-Bearing Strawberries

Of course you like strawberries, and as often as you can get them. For a long time fall-bearing strawberries have been advertised, but many of them have been in the nature of erratic sports of old varieties that were not worth while, as they did not bear heavily enough to pay for the effort. By repeated crossing of varieties, however, it has gone beyond the questionable stage and Fall-bearing Strawberries are now as sure as the spring varieties. You must, however, bear in mind that strawberries are over 90 per cent water, and if the summer is hot and dry the berries will not be plentiful or of good size unless they get sufficient moisture.



Progressive



Bubach

PROGRESSIVE (Per.). This berry now been on the market for five years and has made good in every way. Many years' time and a great outlay in money have been spent in developing its fall-bearing qualities. Of all the fall-bearing varieties, the Progressive has been the greatest success. Plants are as hardy as the Dunlap and as free runners. Berries nearly as large, not quite so red and yet of better quality, ripening very early in the spring and continuing until the ground freezes. Even then many green berries will be frozen, but they are ready to begin work early next season, yielding more berries for the spring season than most of the ordinary varieties. The plants are able to stand the strain, being large and vigorous. Plants set in April may be allowed to bear after August 1 of the same year. This variety makes many nunners and will often send out fruit spurs as soon as fairly well rooted. We do not hesitate to reccommend this variety, and we place it ahead of all other fall-bearing kinds. Try some Progressive.

AMERICUS (Per.). Berry bright red, above average size, roundish, rich aromatic flavor. The Americus is probably the best flavored of the ever-bearing varieties, and you can have them constantly for months. It is claimed by some that it is not as firm as Progressive, but others think it equally as good as a shipping berry. In the spring it blooms and fruits with the other spring fruiting sorts, but continues to bloom and fruit throughout the season. If the early blooms are killed by the frost a new set of blooms appear. If

the fruit is wanted to immediately follow the other spring-fruiting sorts, pinch off the first fruit blooms that appear, and others will immediately form that will delay fruiting only until the main crops of fruit is gone. A perfect flowering variety, it does not require another variety to pollinate it.

SUPERB (Per.). This variety is considered by many of the Northern growers as the best of the fall-bearing varieties. The berry is large, dark red, firm and of good quality. A healthy grower and makes runners freely. Planted in the spring it makes a good quantity of fruit the first fall, a large crop the following spring, and another crop the same year, from August to frost. This berry is particularly recommended for planting in the hill system.

Fig Type Strawberries

This type of strawberries has been obtained by careful breeding, selecting from the darker varieties, by hand pollinating over a number of years. They are rich in fruit sugar. Our plants come direct

from the originator and are guaranteed to be true to name. Try them.

Grand Marie (Per.) Originator's description: "A large, hardy plant, with upright habits of growth and well balanced root system; stolons strong, making an abundance of plants; berry tapers to a point, even and smooth, firm and sweet; color dark red clear through; large to very large; can remain on plant several days after fully ripe, remaining rich and sweet, of the nature of figs; very prolific. Season medium to late."

Raspberries

Cumberland (Black). Berries large, black, good quality, highly productive. Bush is



Cumberland

a rank grower, fruit spurs are long and fruit easy to pick. Later than Black Pearl and Kansas, and a berry that we highly recommend.

Kansas (Black). Good variety for market or home use. Does well everywhere. Strong, vigorous and hardy. Berries large, very black, firm, good in appearance and of the best quality. We have fruited it a number of years and know its value.

Cardinal (Purple). A vigorous grower, leaves hanging until late in the fall. Does not sprout. Propagated from tips. Said to be the most hardy raspberry grown. Berries very large and purple. Splendid for home use.

Cuthbert (Red). The leading late red raspberry. A very strong grower; very productive; fruit large and of extra fine quality. This variety is probably planted in larger quantities for market purposes than any other two varieties, and the returns justify the use of this berry in such quantities.

King (Red). The best early red raspberry. The berries are large, bright red and firm. Cane hardy and a vigorous grower. Plant King for your early red raspberries.

Golden King (Yellow). A yellow berry of Eastern origin, very showy and beautiful when contrasted with the black and red raspberries. It is recommended for kitchen and dessert use.

Dewberries

Lucretia. This is the standard variety. It is really a trailing blackberry, but ripening much earlier than most blackberries, beginning with the black raspberries. The fruit is juicy and palatable and is much in demand. Very high in quality.

Novelties

Juneberry (Amelanchier). Desirable as shrub for ornamental purposes, and for its fruit. Blooms early. Fruit dark red, almost black. Grows anywhere and is especially adapted for use in dry climates.

Himalaya. A wonderful berry in many parts of the country. Tremendously productive and very vigorous in growth. Looks like a blackberry, but the canes do not die each year, as the blackberry does. Often makes a growth of 30 feet in a single season. This berry grows very rapidly. Try it.

Blackberries

Blower. Claimed to be the hardiest, most productive, the finest quality, and to bring on the market the highest price of all blackberries. Large size, jet black, good shipper, best quality, unexcelled productiveness are the main characteristics of the splendid new sort.

Early Harvest. The earliest blackberry in cultivation, and a compact grower, sending out short laterals. The fruit is of good quality. Its earliness makes it a desirable berry.

Eldorado. This berry has been tested here through a period of several years and is an excellent berry. It is comparatively free from rust, perfectly hardy, and the berries when ripe are very large, black, and do not turn red when picked. Give this berry a careful trial.

Iceberg. This is a white blackberry and a novelty worth planting. Cane is hardy and very productive. Berries medium size and creamy white.

Mersereau. This is without doubt the blackberry of all the new blackberries. It is very large and long; jet black, luscious and has all the qualities of an ideal berry. We have never seen any berry that fruited so well. We have no hesitancy in recommending this one to all who intend planting blackberries.

Rathbun. Propagates both by tips and suckers. Berry is large, jet black and colorless, seeds small. This berry is of extra quality, with a particularly rich aroma.

Snyder. Very popular in this section on account of its hardiness and productiveness. Medium in size, fruit juicy and sweet. Canes very strong and thrifty; extensively planted. Berries firm enough for long shipment.

Ward. Resembles Kittatinny, but resists the rust much better and is more hardy. Berries very large and black, coreless and of fine quality.



Mersereau



Campbell's Early

Grapes

Black Grapes

Concord. The standard from which all grapes are reckoned. Too well known to need description.

Worden. In quality one of the finest. Larger than Concord, season a little later, skin tender. To get best results should be pruned shorter than Concord and should be planted on strong soil.

Campbell's (Campbell's Early). A new variety that cannot be too highly recommended, but requires special attention, as it fruits heavily and must be pruned more closely than most other sorts. Very early, bunches very large, and the berry the largest. Color dark blue, skin thick. A splendid shipper and of excellent flavor.

Moore (Moore's Early). The best early grape. Ripens first of August. Black, large, sweet and productive. Should be planted on rich soil.

White Grapes

Niagara. Best all-around white. Bunch large, fine, strong grower. Berries sweet. Very productive, medium early and hangs on well after ripening.

Diamond (Moore's). Greenish white. Seedling of Concord. Quality very good. Berry not so large as Niagara.

Red Grapes

Woodruff (Red). This is a very fine table grape. It is a beautiful pink and red and much desired. It yields as much as Concord and on the market brings about one-half more in price.

Wyoming (Red). Not so large as Wood-ruff Red, but very sweet and prolific. Bunch compact.

Deleware. Bunches small, compact. Berry small and round. Color light red. Quality the very best. Sweet, spicy and delicious.

Currants

Fay. A gross feeder, and requires liberal fertilization. Healthy, vigorous and very productive; bunches are long, easily picked, and command a high price. Berries are large and hold their size well to the end of the bunch. They are bright red, of good flavor and less acid than some.

Cherry. Very large, bright crimson, the bunches short and plant vigorous. One of the largest currants.

London Market. Plant is extremely vigorous with perfect foliage, which it retains through the season, and protects the fruit, making it one of the surest croppers.

Red Dutch. A strong-growing plant. Cluster long, berry medium, bright red. Quality extra good, very productive.

North Star. Very strong and vigorous, bunches larger than Cherry, but individual berries smaller. Combines great hardiness and productiveness.



Perfection

Victoria. Very large, bright red; bunches very long; late; very productive and valuable. This is a standard, good and reliable currant, and will suit everybody.

Black Naples. An upright grower. Current medium to large. The best current for preserving; very pulpy. Color black.

White Grape. Very large white berries; sweet or very mild acid; perfectly satisfactory for any purpose.

Perfection. Originated in Rochester, New York. Cross between Fay's Prolific and White Grape. Color bright red. Berry large with long bunches. A heavy bearer and easily picked. Splendid sub-acid flavor, with few seeds.

Gooseberries

Downing. Large, handsome, pale green and of splendid quality for both cooking and table use. Bush a vigorous grower and usually free from mildew.

Josselyn (or Red Jacket). Berry very large and smooth. Very hardy. The best of the large type of gooseberries.

Houghton. Never fails entirely; very productive. Berries small but good in quality. Best commercial variety in this section.

Oregon Champion. This berry is of the Houghton type. Berry medium in size. Successfully grown over a large area and is being planted very extensively, particularly in the Northwest and North. Excellent reports from all who have tried it.

Industry. Probably the largest gooseberry grown. One of the best of the English varieties. Color dark red. Quality the best.

Rhubarb

Linnaeus. This is one of the cheapest vegetables to grow. Market gardeners generally pull some the first year, but it is well to give it a full year of cultivation before using any of it. Plant the crowns a little below the surface. Manure heavily and cultivate well. It is easily canned for winter pies and may be used from early spring to September.

Victoria. The most valuable for market on account of its gigantic growth.



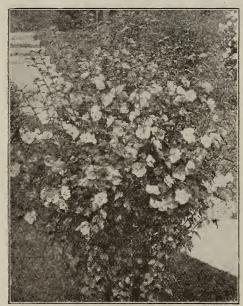
Deutzia Crenata

Hardy Ornamental Shrubs

A good shrub collection is a valuable addition to any lot, whether large or small. The number of shrubs wanted will depend upon the size of the lot or grounds to be decorated. By careful selection of varieties, an assortment may be obtained that will give blooms from early in the spring until late in the fall; also a variation in foliage, different shades of green, purple, yellow, etc.; shrubs of different heights, those that are evergreen or nearly so, and varieties that produce berries for winter ornamentation, or that have attractive wood coloring in winter.

ACACIA. Robinia Flowering Locust

Rose Acacía (R. Hispida). A native species of spreading irregular habit; long clusters of pea-shaped, rose-colored flowers in June and at intervals through the season; foliage a light green.



Althea, Rose of Sharon

Rose Acacía (R. Neo-Mexicana). Grows five to six feet hight; branches covered with stiff prickles; flowers rose-color in drooping racemes.

ALMOND (Flowering). One of the earliest flowering shrubs, very showy plant and with a mass of very double blooms, white or pink. One of the handsomest early flowering plants.

ALTHEA. Hibiscus Syracus

Rose of Sharon. One of the most showy and beautiful of shrubs; flowers large, double and many brilliant colors; blooms freely in August and September, when few other trees and shrubs are in blossom.

Ardens. Violet color; petals quilled; very large and double.

Boule de Feu. Violet red color; very double; blooms late.

Colestis. Single; flowers blue.

Duchess de Brabant, Reddish-lilac color, very large and double.

Elegantissima. Double, white with maroon shading.

Rubra Flore Pleno. Double red.

Jean de Arc. One of the best; pure white and double.

Lady Stanley. Very double; white with beautiful blush.

AMORPHA Fruticosa (False Indigo). A large spreading bush. Slender spikes of deep purple flowers that bloom in June when the spring flowers are nearly gone. Tall.

ARALIA

Japonica. A handsome and distinct shrub, with large, tripinnate leaves and spiny stems; flowers white, in large spikes in August.

BARBERRY, Purple-Leaved. A shrub growing five feet and over, with violet purple foliage and fruit. Stands pruning well, and is very effective in groups, hedges, or as single specimens. Medium.

Barberry, Thunbergii. A valuable shrub from Japan that fits in with almost every planting. Dwarf, graceful habit; foliage is small, changing to beautiful bright red early in fall. (Also see Hedge Plants.)

Barberry, Vulgaris. A rapid growing variety with bright green foliage. Desirable in shrub beds on account of bright foliage. Medium.

CALYCANTHUS Floridus (Carolina Allspice). A well known native shrub bearing double chocolate colored flowers. Leaves and wood are highly aromatic and spicy. Medium.

CRAB, Bechtel's Double-Flowering. There is no spring flower that is more pleasing than this. A dwarf tree or tall growing shrub growing to 12 to 14 feet. In the early spring it is covered with very double rose-shaped flowers, very fragrant and very pleasing. It is very desirable.

CURRANT

Crimson-flowering (Ribes sanguineum). Small, deep red flowers in long, drooping racemes in early spring. Is very ornamental.

Double Crimson-flowering (R. sanguineum fl. pl.) A variety of the above with double flowers in July. A most beautiful flowering shrub.

DEUTZIA, Pride of Rochester. The best of the Deutzias. Flower large, blooms profusely, and makes a vigorous growth. Medium.

Gracilis (Slender-branched Deutzia). A dwarf species from Japan. The flowers are pure white. Fine for pot culture as it flowers freely at a low temperature in the winter.

Crenata fi. pl. Flowers double white, tinged with rose. One of the most desirable shrubs in cultivation.

Candidissima. The pure snow-white, double flowers are of great beauty, and valuable for bouquets and baskets. Exceedingly dainty and beautiful.

Deutzia, Lemoine's. Single pure white flowers in broad clusters in early spring.

DOGWOOD

Cornelian Cherry (Cornus). (C. mascula). Bright yellow flowers in May, followed by scarlet berries in autumn.

Red-branched (C. Siberica). The bloodred branches make it very conspicuous and ornamental in winter. The flowers are greenish white.

Double-flowering Corchoras (Flora plena). It blooms profusely from the last of June until autumn, with double globular flowers.

ELDER, Golden. Bright yellow foliage, flowers and fruit the same as the common Elder. Very effective in shrub beds on account of its brilliant golden foliage. Tall.

EXOCHORDA Grandiflora (Pearl Bush). A vigorous growing shrub, forming a neat, compact bush, 10 to 12 feet high; flowers pure white, borne in slender racemes, of eight to ten florets each. Perfectly hardy. Makes a magnificent display when in bloom. Medium.

EUONYMUS, Americanus. (Strawberry Bush). Ornamental and showy, its brilliant dark red berries, which hang in clusters from the branches until mid-winter, are its chief beauty. The contrast is very fine when planted with a background of evergreens. Leave scarlet in autumn. A handsome native shrub. Tall,



Crab, Bechtel's

Euonymus Europaeus. Similar to the above, but different in color of bark, leaf and fruit. Bark and leaf beautiful glossy bright green; berries very plentiful and a bright orange. Makes a splendid Christmas decoration. Tall.

FORSYTHIA

F. Intermedia. Flowers bright golden yellow; foliage glossy green; resembles the Viridissima, but hardier; a valuable variety.

F. Viridissima. A fine hardy variety; leaves and bark deep green; flowers deep yellow, early bloomer.

Weeping Forsythia (F. Suspensa). Resembles the Fortune in its flowers, but the growth is somewhat drooping.

FRINGE TREES

See Purple and White Fringe, pages 21-23.

Halesia Tetraptera (Silver Bell Tree). A neat and pretty little tree, with large, dark green leaves. May be grown as a shrub. In May while the leaves are yet small, its branches are hung thickly with small white or pinkish drooping bells about one inch long. These are followed by large and curious winged seeds which impart to it a strangely ornamental effect.

GOLDEN BELL (Forsythia). Recommended for its beauty in early spring. Bright golden yellow flowers in April before the leaves appear. Foliage bright green all through the summer. Tall.



Hydrangea

HONEYSUCKLE BUSH. Lonicera

Fragrant Bush Honeysuckle (L. Fragrantissima). A spreading shrub with deep green foliage and fragrant small flowers which appear before the leaves; bushes are erect in growth.

Pink Tartarian Honeysuckle (L. Tartarica rosea). Pink flowers that make a lovely contrast with the foliage; planted with the Grandiflora, the two make a beautiful display.

Pink Flowered Honeysuckle (L. T. var. grandiflora). Produces large, bright red flowers striped with white, blooms in June.

Red Tartarían Honeysuckle (L. T. var. rubra). Blooms early in the spring; flowers a beautiful bright red.

White Tartarian Honeysuckle (L. T. var. Alba). Produces creamy white, fragrant flowers in May and June; forms a high bush.

HYDRANGEA

Hardy Hydrangea (H. Paniculata grandiflora). A beautiful, tall shrub with leaves of bright, shiny green; flowers are borne in huge panicles from 8 to 12 inches long, light pink, changing to brown later in the fall; blooms in August and September; can be grown in tree form successfully and makes a very desirable lawn ornament.

Japanese or Garden Hydrangea (H. Hortensis, var. Thos. Hogg). One of the hardiest; well adapted to pot culture and outdoor cultivation; flowers pure white; a profuse bloomer.

White Flowered Hydrangea (H. Arborscens Alba Grandiflora). Resembling the Paniculata in general form and shape of flowers; borne in paricles of pyramidal shape from 5 to 8 inches in diameter and 8 to 10 inches long; changing to a greenish-white; one of the best.

JAPAN QUINCE (Cydonia Japan). One of the choicest shrubs, of somewhat-straggling growth, but can be trimmed to any shape, making a beautiful hedge. Flowers large and brilliant, and among the first of the spring. As a single specimen it is unexcelled. Foliage is bright green all summer. Medium.

KERRIA, Japonica. During the past season we had many calls for the name of a very double yellow flower that was in bloom all summer. The usual instruction when informed that this was Kerria Japonica, was, "Book me for two, six or more for this fall." It begins to bloom about May 1, and blooms freely throughout the year. It never blooms as heavily at

one time as does the Snowball or Spirea Van Houtte, or other plants of that nature, but it is always in bloom. Prune back closely each year as the wood is very Medium. brittle.

LILAC

Rouen (S. Rothomagensis). A distinct hybrid variety, with reddish flowers; the panicles are of great size and very abundant. One of the finest lilacs.

Varieties of Syringa Vulgaris (Lilac)

Abel Carrier. Double flowers, large, blue, reverse of petals rose.

Charles X. Single. Strong rapid grower; trusses large, rather loose; reddish purple. Very popular.

Charles Joly. Double. Very dark red-

dish purple; superb.

Emile Lemoine. Double. Flowers very

large, rosy lilac.

Leon Simon. Double. Panicles compact; flowers bluish crimson.

Ludwig Spaeth. Single. Panicles long; individual flower large, dark purplish red. The finest of its color.

Madame Lemoine... Double. White;

superb.

Marie Legraye. Single. Panicles of white

flowers. One of the best.

President Grevy. Double. A beautiful blue; very large; the panicle is magnificent, measuring 11 inches in length and 5 inches across. One of the finest lilacs.

LILAC, Common Purple. The well known old-fashioned lilac, so often seen in gardens. The flowers are bluish purple and

very attractive. Tall.

Lilac, Large-Flowering White. A beautiful variety with large panicles of pure white flowers. Tall.

Lilac, Persian. This variety is a native of Persia and grows from 10 to 12 feet high, with small leaves and bright purple flowers. Tall.

LESPEDEZA bicolor (Shrubby Bush Clover.) Small purple flowers produced in nodding racemes.

MAHONIA (Berberis aquifolium). For winter effect this is particularly good, as the foliage is retained through the coldest weather, turning to a bronzy hue. In summer its holly-like, spiny leaves are a rich, lustrous green. The flowers are borne in dense clusters, being followed by dark blue berries. Dwarf.

MYRICA cerifera. A low-spreading shrub, with handsome foliage and small white berries in autumn. Partially ever-

OLIVE, Russian (Eleagnus Angustifolia.) A large shrub sometimes of tree form with long, narrow, silvery green foliage. The flowers are yellow, followed by yellow fruit. Tall.

PHILADELPHUS (Syringa or Mock Orange) Coronarius. A well known very hardy shrub with showy white flowers, which are very fragrant. Tall.

Philadelphus Grandiflorus (Large-flowering). Large, showy flowers. A valuable Tall. variety.

PLUM. Flowering (Prunus Semi-double flowers of a delicate pink, closely set along the slender branches, early in spring. A valuable addition to the early shrubs, and very ornamental.

PURPLE FRINGE (Smoke Tree; Rhus Cotinus). A shrub or small tree of spreading habit, covered in mid-summer with a profusion of dusty, fringe-like flowers. Very much admired and desirable for the striking peculiarity of its flowers.

PRIVET, Ligustrum

Amoor River Privet (L. Amurense). A valuable ornamental shrub for hedges and borders; very hardy; foliage glossy green and holds its color almost the entire year; will stand shearing to any extent.

California Privet (L. Ovalifolium). The well-known variety; vigorous and hardy; deep glossy green; useful for hedges and borders.



Lilac

English Privet (L. Vulgaris). Foliage narrow; showy white flowers in June, followed by fruit.

Chinese Privet (L. Ibota). A native of China and Japan; foliage long and shining; flowers large, white and fragrant; a distinct sort, valuable for its flowers and foliage.

RHODOTYPUS, Kerriodes. From Japan. A medium sized ornamental shrub handsome foliage; large, single white flowers late in May, succeeded by numerous small fruits. Medium.

RHUS (Sumac) Cotinus. See Purple Fringe.

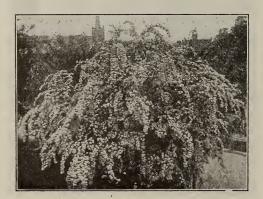
Aromatica (Fragrant Sumac). A spreading shrub; small yellow flowers in clusters of short spikes appear before the leaves; thick and fragrant foliage. In autumn the foliage turns to a dark crimson.

SIBERIAN PEA TREE (Caragana Siberica). Tall growing shrub, upright, with bright green foliage. Native of Siberia. Very hardy. Flowers pea-shaped and solitary. Tall.

VIBURNUM Opulus Sterilis (Snowball). The well known favorite shrub, of large size, with globular clusters of pure white flowers. Medium.

Viburnum Opulus (High Bush Cranberry). A tall shrub, upright, spreading branches, 8 to 10 feet tall, widely distributed in the Northern hemisphere. Leaves broadly ovate, three-lobed, bright green. Flowers white, disposed in flattopped clusters in late spring and early summer. The berries are scarlet, persisting all winter. Very showy shrub. Medium.

SNOWBERRY (Symphoricarpus Racemosus). Hardy shrub with small pink flowers and large white berries that hang on most of the winter. A desirable shrub. Medium.



Spirea Van Houttei

SUMACH. Rhus

Cut Leaved Staghorn Sumach (R. Typhina laciniata). A showy, broad-headed shrub with large, long, deeply cut foliage, light green in color, changing to shades of red and yellow in the fall; the new growth is clothed with a peculiar down, giving an appearance of the growing horn of a deer; the bark below is a rich orange color.

Cut Leaved Sumach (R. Glabra, var. laciniata). A variety of the Smooth Sumach with deeply cut, fern-like foliage.

Smooth Sumach (R. Glabra). A shrub 8 feet high with handsome green foliage, changing to beautiful autumn tints; showy spike of crimson fruit.

SUMAC. (Rhus Typhina Laciniata). A large shrub with beautiful cut-leaved foliage. Medium.

SPIREA

The plants are all of comparatively low growth, and as there are many varieties, the blooming season extends over a period of about three months.

Ash-Leaved (S. Sorbifolia). A vigorous grower with foliage similar to the Mountain Ash and long spikes of beautiful white flowers; blooms in July.

- S. Arguta. Of dwarf habit, spreading head; flowers clear white; the best of the very early flowering white varieties; blooms May.
- S. Anthony Waterer. An improvement on Bumalda, forming a low bush $1\frac{1}{2}$ to 2 feet high, covered all summer with small flat heads of bright pink flowers. Beautiful for edging and desirable in front of shrubbery. Dwarf.
- S. Billardi. Branches are erect, crowned with narrow, dense spikes or rose-colored flowers nearly all summer. Tall.
- S. Bumalda. A handsome variety from Japan; dwarf habit and vigorous growth; foliage narrow; flowers rose colored and borne in great profusion; blooms a long time.
- S. Callosa Alba. Dwarf, with large, flat clusters blooming nearly all summer; very compact. Dwarf.

Douglas' Spirea (S. Douglasi). A beautiful variety with spikes of deep rose colored flowers in July and August.

Fortune's Dwarf White Spirea (S. callosa alba). A white flowering variety of dwarf, symmetrical form; keeps in flower all summer; a valuable sort.

Golden-Leaved Nine Bark (S. Opulifolia, var. aurea). A beautiful variety with golden-yellow foliage and double white flowers in June.

Nine Bark (S. Opulifolia). One of the most vigorous growers; foliage light green; flowers white and produced in great profusion.

- S. Prunifolia. (Bridal Wreath). A beautifu pure white flower; holds its bloom well. Very free bloomer and early. Medium.
- S. Reevessii (Lanced-leaved). A charming shrub with narrow, pointed leaves and large, round clusters of white flowers that cover the whole plant. Medium.
- S. Van Houttei. This is without doubt the finest variety in the whole family. At the flowering season the whole plant is covered with a mass of large, pure white flowers, presenting a beautiful appearance. Tall.
- S. Thunbergii (Thunberg's Spirea). A graceful bush, with innumerable small white flowers; leaves narrow. Valuable for forcing. Very early flowering. Dwarf.

TAMARIX. This species has light, feathery foliage an ddelicate pink flowers. They grow from 8 to 10 feet high. Flowers appear in May and June. Three varieties: Japonica, dark green; Gallica, grayish blue; Hispida, bluish green. Tall.

WHITE FRINGE. Chionanthus

White Fringe or Fringe Tree (C. Virginica). A desirable ornamental shrub of easy cultivation; dark green foliage; flowers pure white; having narrow, fringe-like petals; blooms in May and June.

WEIGELIA. Dierville.

- D. Floribunda. A fine variety, flowers a dark red and a profuse bloomer.
- D. Van Houttei. Flowers are a rich shade of carmine and are produced profusely.

WEIGELA Candida. This is the best and most popular white variety. Of large size, erect and vigorous growth. Produces pure white flowers in June and July in great profusion. A valuable feature is that it blooms moderately througout the summer. Medium.

Weigela Eva Rathke. The very best red flowered variety. A continuous bloomer. Medium.

Weigela Rosea. Strong grower and profuse bloomer. Flowers pink, rose and white. May and June. Medium.

XANTHOCERAS Sorbifolia. A very handy shrub, blooming in May and June. Flowers pure white, followed by pods resembling Buckeye. Comparatively new but satisfactory. Medium.

Hardy Climbing Vines

Cinnamon Vine. From the Oriental land; is one of the most charming climbers, and will quickly surround your arbor, window or veranda with a wonderful profusion of vines, covered with handsome, glossy, heartshaped leaves and sweet-scented flowers, making it a perfect bower of beauty—thriving everywhere and once planted will grow for many years. The vines often run 25 to 40 feet. Beautiful, hardy, entrancingly fragrant. Grows in shade or sun, wet or dry. No insects ever trouble, no winter harms. Once planted will grow a lifetime.

Clematis

Large Flowering Varieties

C. Jackmanni. This is the most popular large flowering variety. The flowers are from 4 to 6 inches in diameter, of an intense violet-purple color, borne successively in continuous masses on the summer shoots. Generally considered the best Clematis of its color.



Clematis Jackmani

C. Henrii. The best of the large flowering white varieties.

C. Ville de Lyons. Red, large flowering. Very fine.

C. Paniculata (Sweet-scented Japan Clematis). A Japanese plant possessing unusually attractive merits. Of very rapid growth, quickly covering trellises and arbors with handsome, clean, glossy green foliage. The flowers are of medium size, pure white, borne in immense sheets, and of a most delicious fragrance. The flowers appear in September, a season when very few vines were in bloom.

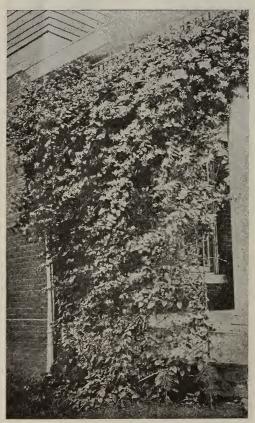
Duchess of Edinburg. Fine, large, double white flowers; blooms freely.

Henryi. Flowers creamy-white and very large. A free bloomer.

Madam Edouard Andre. Flowers are a beautiful shade of crimson; a free bloomer.

Ramona. A vigorous grower and perpetual bloomer; flowers a deep, rich lavender.

DOLICHOS, Japonica (Kudzu Vine). A most worthy ornamental vine. Rapid grower, bearing rosy purple, pea-shaped flowers in August.



Honeysuckle

HONEYSUCKLE

Japan Golden-Leaved Honeysuckle (L. Aurea reticulata). A handsome variety, with the foliage beautifully netted or variegated with yellow.

Monthly Fragrant Honeysuckle (L. periclymenum, var. Belgica). Blooms all summer; flowers red and yellow and very fragrant.

Scarlet Trumpet Honeysuckle (I. Semper virens). One of the handsomest in cultivation; a strong, rapid grower; flowers a bright scarlet, not much odor.

Yellow Trumpet Honeysuckle (L. Flava). A strong native vine with brightest orange-yellow trumpet shaped flowers.

Akebia Quinata. A Japanese variety of climbing shrub, with large leaves and white, purple centered flowers.

Engelmann's Ivy or Woodbine (A. quinquefolia, var. Engelmanni). A type of quinquefolia, which has long been desired. It has shorter joints and smaller and thicker foliage. It is better equipped with tendrils. by which it will climb walls of stone or brick as closely as the Veitchii (Boston Ivy). It should be planted in the central and northwestern states, in place of the Veitchii, as it is perfectly hardy, withstanding heat and cold much better.

HONEYSUCKLE, Scarlet Trumpet. A strong rapid grower, and produces scarlet flowers. This is the handsomest in cultivation.

Honeysuckle, Hall's Japan. A strong growing and most fragrant sort with pure white flowers changing to yellow. Very fragrant, and covered with flowers from June to October.

IVY, American, or Virginia Creeper. One of the finest vines for covering walls and trunks of trees, afford shade quickly. 20 cents each.

Ivy, Boston. Foliage very handsome in summer, changing to scarlet in autumn. Especially recommended for covering brick and stone structures.

BIGNONIA Radicans (or Tecoma). Trumpet Flower. A splendid hardy climbing plant. Large trumpet-shaped scarlet flowers. Very easily grown.

Bignonia Grandiflora, Chinese Trumpet Creeper. More ornamental than the ordinary Trumpet vine, but not quite so hardy. The younger shoots are frequently killed back, but the plant seldom damaged. The flower is very beautiful, and immensely attractive.

CELASTRUS SCANDENS (Bitter Sweet). A native climbing vine that stands transplanting easily and that is very

ornamental in winter, by reason of its scarlet berries.

LYCIUM CHINENSIS (Matrimony Vine). A hardy plant that serves both as vine or shrub. Slender drooping branches with purple flowers from June to September, succeeded in winter by scarlet or orange fruit. Grows anywhere.

SILK VINE. Periploca

Silk Vine (P. Graeca). A beautiful, rapid climber; splendid for training around pillars, trees or other tall supports; grows to 30 or 40 feet; foliage a smooth, glossy green and very showy; flowers a purplish brown, borne in clusters.

WISTARIA

American Purple Wistaria (W. Magnifica). Flowers are borne in dense, drooping clusters of a pale blue color; vine vigorous, hardy and a rapid grower.

Chinese Purple Wistaria (W. Sinensis). One of the best of the Wistarias; rapid-growing and elegant, attaining 15 to 20 feet in a season; flowers a pale-blue, borne in long pendulous clusters in May and June.

Chinese White Wistaria (W. Sinensis, var. Alba). Same as the Chinese Purple, except the flowers are pure white; very beautiful variety.

Hardy Herbaceous Perennials

These plants are all hardy. They are selected from a list of perennials that have proved to be best for flowering or foliage. They are easily grown, and a selection from this list will give a succession of flowers from May until November.

ACHILLAE, or Yarrow (variety The Pearl). A low-growing hardy plant, blooming continuously throughout the summer. Pure white flowers in great profusion, drooping close to the ground, make it an extra fine border plant. Very good also as a cut flower.

ADAM'S NEEDLE, or Yucca (variety Filamentosa). An old-time plant that should not be omitted. Three to four feet in height, with 100 and upward of white bell-shaped flowers. Foliage evergreen.

BLEEDING HEART (Dicentra Spectabilis). One of the daintiest and most beautiful of the early flowering perennials. One of the choicest of the old flowers.

COREOPSIS Lanceolata. One of the most profuse bloomers. A very fine border plant growing about eighteen inches high, but also very showy when planted singly. Color bright golden.

DAISY, Shasta. A very beautiful, hardy plant. Blooms through the whole summer. Flowers very large, pure white, on strong stems; a fine flower for cutting, and among the best of the perennials.

DELPHINIUM, or Larkspur. Large sky-blue flowers. Very free flowering.

DESMODIUM. A fall blooming perennial that is among the most satisfactory of flowers. It grows to the height of about two feet and has long, drooping branches covered with small purple flowers that give a splendid effect. It is planted generally on corners of terraces or as specimen plants, and is particularly valuable, as it blooms when flowers are scarce in September.

GRASSES — Eulalía, Zebrína. This is one of the most striking and distinct grasses in cultivation. Unlike most plants with variegated foliage, the striping or marking is across the leaves instead of longitudinal, the leaves being striped every two or three inches by a band of yellow one-



Shasta Daisy

half inch wide. Late in the fall it is covered with flower spikes that resemble ostrich plumes in shape, which when cut and dried make handsome ornaments for the house in winter. It is perfectly hardy.

Eulalia, Japonica (Variegated). Resembles the Zebrina, except that stripes are

longitudinal.

Eulalia Gracillima. One of the most satisfactory of grasses. Very fine leaves growing to about three feet, bright green. Very compact.

FUNKIA, or Plantain Lily. A plant with luxuriant foliage and handsome lily-

like flowers, May and June.

Gailardía Grandíflora Superba. (Blanket Flower.) Makes one of the most gorgeous and prodigal displays of all perennials. Flowers often measure 3 inches in diameter, on clean, 2-foot stems. A hard center of deep maroon is thickly bordered by petals of orange and yellow, ringed by circles of crimson, red and maroon. Poor soil will do, and a constant show is assured from June till frost.

GOLDEN GLOW (Rudbeckia). Also known as Corn Flower. None can make a more gorgeous effect than this flower. Blossoms large and yellow. September and October.

HELIANTHUS (variety Maximiliani). A splendid variety of the sunflower, the



Hibiscus

latest bloomer of its class. Flowers grow on spikes eight to ten feet high. Color bright yellow. Splendid for back grounds.

HEMEROCALLIS Fulva (Tawny Day Lily). Tall growing and free blooming. June and July. Four to five feet.

Hemerocalis Flava (Yellow Day Lily, Lemon Lily). Not so tall as Fulva, brighter color. June and July.

Hemerocallis Gold Dust. A new variety. Very bright yellow. May and June. A beauty. Fine for cut flowers.

HIBISCUS, Crimson Eye. A very large flower about the size of the Holloyhock, but almost pure white, with crimson center. Stalk about four feet high and blooming about two months. Opens early in the morning.

Hibiscus (Mailow Marvels). One of the most showy of perennials, growing as they do to the height of from four to six feet. Red, white and pink.

HOLLYHOCKS. Not many, if any, of the hardy perennials surpass the Hollyhocks in effect. Planted in groups or interspersed in shrub beds they are invaluable. The double varieties make perfect rosettes of white, pink, yellow, cream and red.

PERENNIAL PEA (Lathyrus). Of course you like Sweet Peas, but it is a lot of trouble to plant them each year. The perennial sweet peas looks like the annual but blooms all summer, dies to the ground each year and comes up again in the spring. It begins to bloom about June 1, and if it has a little moisture, will bloom until frost. Color red and white.

PINKS, Hardy Garden. Dwarf, double flowers. A great improvement over the old fashioned sorts.

POPPY, Oriental (Papaver Orientalis). One of the most attractive of the early-flowering perennials. Its very striking coloring makes it a valuable plant. Should be planted in the fall.

IRIS GERMANICA (German Iris) The "Fleur de Lis" of France

No other flower has so many combinations of color, especially of the delicate and unusual shades, and the name Rainbow Flower is most fitting. They are absolutely hardy, as beautiful in form, texture and coloring as any Orchid, and many are delightfully fragrant. They are not particular as to soil; will grow where anything will, but do better in well-drained location.

There is nothing prettier than this German Iris, blooming from May 10th to June

10th. The colors are gorgeous and they completely hide the plant. Be sure and plant some German Iris.

Florentina. Creamy white, faintly flushed lavender; fragrant and early. This is the Orris root of commerce, being used for the manufacture of toilet powder. The roots are delicately perfumed.

Honorabilis, or Sans Souci. Standard golden yellow, falls rich mahogany brown; very effective.

Madame Chereau. Standard and falls white, elegantly frilled with a wide border of clear blue; very beautiful.

Pallida Dalmatica, or Heavenly Blue. Standard delicate lavender; falls clear deep lavender; flowers very large and extra fine.

Purple Prince. Standard intense deep violet blue; falls velvety dark purple; exceedingly rich and striking.

Queen of May. A lovely shade of rosy pink, tinted with lilac; beautiful.

JAPAN IRIS OR KAEMPFERI

Leaves 12 to 18 inches long, bright green, much overtopped by the stout, strong stems which are two to three feet tall. Flowers very large and showy, six to eight inches across, white and of various shades of blue, violet, lavender and purple. They are among the most beautiful of the perennials, rivaling even the orchids in their rich tints and markings.

PLATYCODON (Japanese Bell-flower). Large, bell shaped flowers. White and blue. Plant very hardy.

SWEET WILLIAM (Dianthus Barbatus). The old-fashioned flower too well known to describe. Plants from best selected strains of selected seed.

VIOLETS, Hardy Russian. Blooms spring and fall. Flowers very fragrant, easy to grow. Very hardy.

HARDY CHRYSANTHEMUMS

In the dull November days, as the frosts creep into the air and the other flowers show the approach of winter, the bright blossoms of the Chrysanthemums-Queen of Fall-reward us with a new wealth of bloom. For out of doors the only satisfactory ones are the hardy. True, their flowers are small compared to the huge chrysanthemums of the florists, grown in the green-house, a single bloom to the stem, but this is fully compensated for by their great diversity of color, rugged constitution and ease with which they may be grown. They are rapidly gaining in popularity for their decorative effect as a cut flower and are extensively grown by the florists. Any good rich, well-drained garden soil is suitable. They are quite hardy, but as they root shallow, should have a light mulch of straw or strawy manure after the ground begins freezing, which is all that is required to bring them safely through the winter. Do not mulch with any material that will pack down tight. The flowers withstand ordinary frosts, lasting until they become wet and frozen after a rain or snow. As they bloom late, a sheltered position such as the south side of a wall or fence, or in the foreground of a shrubbery border, will give them opportunity to develop more fully. Are most effective when planted in masses. A particularly useful cut flower, as they last for weeks.

Ceddie. Velvety bright red.

Ena Reimers. Soft terra cotta.

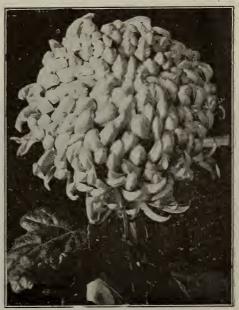
Golden Ray. A fine yellow.

Hilda Wells. A beautiful Tuscan red, shaded yellow at base of petals.

Independence. Pure white, a finebloomer.

SUPERB HARDY PHLOX

Brilliant summer effects may be produced with these easily-grown hardy perennials. They are especially desirable for their great variety of color—pure white, delicate pink, salmon, rich reds, crimsons and violet—and many are delightfully fragrant. They are excellent as single specimens or in the mixed border, but the most imposing effects are produced by planting in large beds or masses. They are admirably adapted for cemetery plant-



Chrysanthemum

ing and for low hedges and screens. They commence blooming in early summer, and if early and late varieties are chosen and the flowers cut off as they fade, will bloom quite late. They succeed in almost any position or soil, but give best results in a rich, mellow soil, planted about two feet apart. After three or four years, take them up, divide the clumps and replant. Early fall is an excellent time for planting. Whether planted fall or spring, a mulch of old manure is of great benefit.

Bridesmaid. Medium. Pure white, clear carmine eye; blooms in large, round heads. Very attractive.

Clara Benz. Lively carmine rose, deeper eye; dwarf; midseason.

Elizabeth Campbell. Very bright salmon pink with lighter shadings and dark crimson eye; dwarf; midseason; excellent.

Independence. An excellent large flowering early pure white; compact truss.

Jeanne d'Arc (Pearl). Late; pure white; tall.

Maculata. Many branched, pyramidal trusses of bright reddish, almost royal purple; tall.

Richard Wallace. Pure white, violet rose eye; large flowers in immense panicles; tall.

R. P. Struthers. Tall. In our estimation, this is the very best phlox grown to-day—it has no faults. It is a clear cherry-red, suffused with salmon shades, and deep red eye; fine large truss. The color is so clear and clean that each individual floret stands out as distinct as a cameo.

HARDY BEGONIA EVANSIANA

Think of it! A hardy Begonia, one that stood twenty degrees below zero last winter, and came up and bloomed all summer.



Lily of the Valley

Another thing in its favor, it requires shade to grow in, at least partial shade. So many persons write us asking for plants suitable for shady places. Well, Begonia Evansiana fills the bill. It is a wonderful, beautiful Begonia, having pendulous flowers in large racemes almost covering the entire plant. Color a sparkling pink that is simply entrancing. Everybody will want a hardy Begonia. It is also fine for pot culture.

Fulva (Tawny Day Lily). Bears a profusion of tawny orange colored flowers in July and August. Four feet.

Fulva F1. P1. Same as the Fulva, except flowers are double.

Lilium Auratum (Golden-Rayed Queen of Lilies). This is the grandest Lily grown. and a never failing delight. The perfume is exquisite—light, yet penetrating. Also known as "Gold Banded Lily from Japan."

Candidum (The Ascension Lily). The well-known hardy garden Lily. Snowwhite, fragrant blossoms. One of the best and an established favorite.

Lancifolium Rubrum. A beautiful bright rose, spotted with a dark velvety crimson.

Lilium Giganteum (The True Bermuda Easter Lily). This peerless Lily is the greatest acquisition to floriculture made in many years. Their profusion of bloom, the remarkably short time required to bring them into flower, and the certainty to produce abundant bloom, and also the ease with which they can be manipulated to be flowered at any desired period, such as Christmas, Easter and other special occasions, make them invaluable.

Triginum Fiore Pieno (The Double Tiger Lily). Bright orange; spotted black and very double.

Trigrinum Simplex. The single Tiger Lily, imported. This is a great favorite. There is no better Lily grown.

LILY OF THE VALLEY

The Lily of the Valley will thrive and throw up its beautiful, modest, fragrant white bells in any kind of soil. Will also adapt itself to pot culture in winter; its delicate, permeating fragrance making it especially desirable.

Tritoma (Red-Hot-Poker). These are tall and striking plants of much beauty when well placed and properly grown. The great spikes of flowers sent up from the center of a broad circle of green leaves, have quite a rich and tropical appearance. Give some protection in cold climates. Bloom from July to September.

Peonies

This flower is today and will be for a long time to come, one of the most highly prized of all the early flowers. Each year it is more difficult to supply the great demand for them. For years only the commoner kinds were known. Now, by cross fertilization and selection, there are many kinds of great beauty and fragrance. We have the very finest of them in red, creamy white, pure white and tinted with pink and rose. If you love flowers, do not fail to try some of the named varieties. Plant them. Each year they are better, and every spring you will have some of the most beautiful of flowers. They will give satisfaction anywhere, but thrive and bloom best in a rich, loamy soil, where there is plenty of moisture. Peonies multiply rapidly and in a few years you can have at a small cost, a great mass of these fragrant, showy blooms. They should bloom the first year, if soil and conditions are right. Cultivate them thoroughly each year. Note our list of named varieties. There are none better. All have from three to five eyes. As in our fruit tree list, we have cut out those varieties that are shy bloomers, or those that for any reason are not desirable.

Alba Plena. We have had this for several years. Sends up many strong stems. Bud and flower very handsome.

Chinese Alba. Creamy white.

L'Esperance. The best early pink. Very large and fragrant. Exceptionally fine bloomer. Splendid cut flower.

Festiva Maxima. Color white, flaked with carmine. A good grower; a fine cut flower. The standard of excellence. The best Peony ever produced.

Floral Treasure. Light pink. A good bloomer and fine for cutting.

Fragrans. An old-fashioned peony, but one of the very best. Late in season. Rose pink. Very good.

Fulgida. A very showy flower and free bloomer. Dark red.

Grandiflora Alba. Blush white. A splendid variety. Very double.

Madame Crousse. Pure white, Large flowered. One of the best for cut flowers.

Magnifica. One of the freest bloomers. White, bandsome for cut flowers.

Queen Victoria. One of the best white flowers. Keeps well and is extensively used for shipping.

Humei. Very large and double. Pale pink. One of the largest peonies grown.

Richard Cairns. Very dark red. Strong bloomer. Medium to late.

Rubra Superba. A very large dark red flower. Full and handsome.

Although our list of Peonies has heretofore been a splendid assortment, we have added the following sorts, after a careful study of the varieties shown in Rochester, N. Y., Washington, and elsewhere. With these kinds added we know that for all purposes our list cannot be excelled.

Felix Crousse. The best red. Very large and double; early to mid-season; very free

bloomer. A new introduction that captivates every one. Tall growing on strong stem. This beautiful flower is to the red varieties what the Festiva Maxima is to the white.

Madame de Verneville. Extra large, sulphur white spotted with carmine. Flower one of the largest and most attractive. Blooms freely and on long stem. Early to mid-season.

Couronne d'Or. Almost pure white, yellow reflection. The name given to the magnificent flower "Crown of Gold," most adequately describes it.

Louis Van Houtte. Bright violet tinged with red. Blooms late to mid-season. Free bloomer. One of the best of the late additions to the list of peonies.

Duchess de Nemours. Sulphur yellow. Medium early. A very showy flower and an excellent keeper. Blooms on long stem and very profusely; excellent.



Peony



Roses

The most popular flower grown, and if it is properly handled it is easily grown. A clay loam gives the best results, particularly if enriched with well-rotted barnyard manure. Dig up the ground thoroughly. Do not mix Tea and Hybrid Perpetual Roses. Make a bed of each kind. Prune heavily each spring. Your roses will be larger and more beautiful by so doing.

Where budded roses are used, plant at least three inches below the bud. If a severe winter follows and the tender kinds are killed back, a part of the budded rose will be protected and the sprout that puts out in the spring, will in this way be of the plant above bud. An effective arrangement for roses is to make a circular bed, raising the center about six inches or more. In the center plant three or five tree roses (Baby Rambler half standards preferred), with the Hybrid Perpetuals next to the tree roses, and with the Hybrid Tea on the outside, if both Hybrid Perpetual and Hybrid Tea are used.

Hardy Climbing Roses

Standard Varieties

American Pillar (Conard, 1909). (C. P.) A single flowering variety of great beauty, which appeals to everyone. The flowers are of enormous size, three to four inches across, of a lovely shade of apple-blossom pink, with a clear white eye and cluster of yellow stamens. These flowers are borne in immense bunches, and a large plant in full bloom is a sight not easily forgotten. They last in perfection a long time, and are followed by brilliant red hips or berries, which are carried late into the winter; and as the plant frequently retains its lively green foliage until the end of November, it a beautiful decorative

throughout the autumn months. A great rose to grow in pots for Easter.

Climbing American Beauty. The introducer says: "Same color, size, and fragrance as American Beauty, with the addition of the climbing habit. One plant of this new rose will produce twenty times as many flowers in June as the old American Beauty, beside blooming occasionally during the summer."

Climbing Frau Karl Druschki (W. Larenson, 1906). (C. H. P.) A sport from and identical with the parent Druschki, except in habit of growth.

Crimson Rambler. The most popular of all the ramblers. Bright crimson flowers produced in large clusters. A splendid

variety for porches, pillars, arhes and to cover walls and fences.

Dorothy Perkins. The very best of the pink climbers; very hardy and one of the most free from mildew. A very rapid grower and much used for covering fences, walls, etc. Flowers come in great clusters of small blooms, and are sweetly scented.

Flower of Fairfield (Everblooming Crimson Rambler). The habit of this rose is a duplicate throughout the Crimson Rambler, except that it has the tendencies of the ever-blooming roses, and blooms frequently during the summer.

Prairie Queen. One of the hardiest of the roses. Frequently found in Canada and Alaska. Old standby pink climber. Large clusters.

Red Dorothy Perkins, or Excelsa (Walsh, 1909). (W.) It is a good deal to claim for a rose, but we are within bounds when we describe Excelsa as a brilliant Crimson Rambler flower on glossy, varnished Wichuraiana foliage. The defects of Crimson Rambler are its unsightly foliage in unseasonable weather, and its defoliation by insects; the infusion of Wichuraiana blood assures an ornamental climber which is nearly evergreen, and this will assure this lovely crimson-scarlet pillar rose a place in every American garden, for it is quite hardy in addition to all its other fine points. The flowers are very double, produced in large trusses of thirty to forty, and almost every eye on a shoot produces clusters of flowers. The color is intense crimson-maroon, the tips of the petals tinged with scarlet. The finest of all crimson Ramblers.

Tausendschon or Thousand Beauty. On opening the color is a delicate pink, changing to rosy carmine. It gets its name from the great mass of flowers produced and the beauty and variation of its coloring.

White Dorothy Perkins (B. R. Cant, 1908). (W.) It has been the cry of nurserymen for years for a white climber that would rank up with Crimson Rambler, and now we have the pleasure of offering this White Dorothy Perkins that in every way is the equal, if not superior, to Crimson Rambler as a red, and Dorothy Perkins as a pink. This rose has no rival as a white climber.

Yellow Rambler. Bright yellow to canary yellow. Great clusters.

Polyantha, or Baby Ramblers Standard Varieties

Including the Hybrid Polyanthas. They are Hardy

Many get the wrong impression from the name of these roses. They do not have

climbing tendencies, and get their name from the fact that they bloom in clusters like the ramblers. They are dwarfs, and should be planted on the edges of rose beds, or as borders to shrub beds, or in beds to themselves. They bloom constantly throughout the summer.

Baby Rambler (Madame Lavavasseur). In bloom all the time, with large clusters of the brightest crimson. Frequently the plant is entirely hidden by the great mass of flowers.

Baby Tausendschoen (Welter, 1911). This Rose was formerly named "Louise, Welter." Its flowers are large and so much like Tausendschoen that it has been rechristened "Baby Tausendschoen." It is a bush form of the "Climbing Tausendschoen" or "Thousand Beauties," having all the charm in the variable coloring in its flowers, that its parent has, being firm, white, delicately flushed pink, changing to deep rosy-carmine. This is a splendid Rose. Try it.

Pink Baby Rambler (Ellen Poulson). Dark, brilliant pink. Almost as free a bloomer as the Baby Rambler. Very fragrant.

White Baby Rambler (Catherine Zeimet). A very vigorous grower and produces a great quantity of flowers throughout the season. A valuable addition to the list of Baby Ramblers. Fragrant.



Baby Rambler

Hybrid Perpetual Roses

Standard Varieties

This class of roses is splendidly suited for garden culture and for the formation of permanent rose beds, rose hedges and other places where permanent plantings are desired. Almost all of these varieties are perfectly hardy. A heavy mulching in the fall is beneficial, using straw, leaves, etc. In the spring prune heavily, removing weak branches and cutting the long canes to one-half or more.

American Beauty. The most sought for and probably the best known of the roses in this class. Color a rich red to crimson. Fragrant.

Captain Hayward. Deep glowing crimson. Size very large. As a bloomer there is no rose in its class that surpasses it.

Conrad Ferdinand Meyer (Froebel, 1900). This rose has Rugosa blood in its makeup and is classed by some as a Hybrid Rugosa; it's the best Hybrid Perpetual you have ever known. This is a grand rose, a vigorous grower, and free bloomer; flowers large, perfectly double, cup-shaped. Color deep, bright vivid, intense pink, with the penetrating fragrance of the old June Roses.

Frau Karl Druschki. One of the hardiest and without question the largest and best of the white H. P. roses. Some call it "Snow Queen," others speak of it as the "White American Beauty." Very vigorous and free bloomer.

General Jacqueminot. Crimson scarlet. Very fragrant. Flower large and globular. Free bloomer.



Captain Hayward

Madame Charles Wood (E. Verdier, 1861). Bright cherry red; extremely free bloomer. A grand garden rose. This is the same rose as Dinsmore.

Madame Plantier. Absolutely hardy. Throws out many branches and forms multitudes of bloom buds that in spring completely hide the plant with its pure white flowers. Fragrant.

Magna Charta. Color a bright rose, very large and double. Flower and bud of good form and fragrant.

Marshall P. Wilder. Deep, rich, glowing red. Many consider this the best of all the red H. P. roses. It is a beauty.

Paul Neyron. Color deep rose. Many claim that this is the largest rose grown. It attains immense size, blooms freely on long stems, making it a very valuable rose for cut flowers. The plant is a strong, hardy grower and one of the most prolific bloomers. Always plant Paul Neyron.

Persian Yellow. The old-time yellow rose that produces such quantities of yellow flowers in the spring. Hardy and very productive.

Ulrich Brunner. Cherry red. Size extra large. Hardy and very productive. The form of this rose is excellent and one of the best cut flowers.

Hybrid Tea Roses

Standard Varieties

These roses are not so hardy as the Hybrid Perpetuals, but with proper care can be made to come through the winters without much loss. These roses are all very free summer bloomers and will produce flowers until frost. Late in the fall mulch deeply and in the spring prune back closely. The blooms all come on new wood, and by cutting back closely the flowers will be much larger.

Burbank. Cherry rose. Classed by many as a China rose. With us the Burbank and Gruss an Teplitz have been the most constant of all the summer bloomers. The flower of this rose is not large, but it is always in bloom. We know that you will like it.

Clothilde Soupert. The color effect is ivory white, shading toward the center to bright silvery pink. This rose is also classed with the Polyantha roses. Everyone can grow the Soupert.

General McArthur. Brilliant scarlet. A splendid shade, hardy and very satisfactory.

Gruss an Teplitz. One of the most attractive roses in existence. Fiery red, semi-

double. In bloom all the time. The plant is very hardy.

Helen Gould, or Baldwin (Lambert, 1898). This is a grand rose of the very highest merit for the garden; bright water-melon-red; very free grower and bloomer.

Kaiserin Augusta Victoria. Pure white with shadings of primrose yellow. A strong grower and free bloomer. We consider it the best white Hybrid Tea rose.

Killarney. The finest pink forcing rose grown, and a very satisfactory outdoor rose. The buds and flowers are of enormous size.

Lady Ashtown. Deep rose, shading to silvery pink. Large, full and fine form. Free and constant bloomer.

Madame Ravary. Buds beautiful golden yellow, opening to large, full orange yellow flowers.

Mrs. Aaron Ward. The general effect of this rose is Indian yellow. The bud is coppery orange, developing to golden orange. Extra fine.

Rhea Reid (Hill, 1908). This is the new red forcing rose; flower large and double, very free blooming and exquisitely fragrant, rich dark velvety red; a good red garden rose. The flowers are double, of fine size, while the color is all that is to be desired.

Richmond. Pure rich scarlet. Very free and continuous bloomer. Long pointed buds, elegant dark foliage.

Tea Scented Roses

Standard Varieties

The Bride. (May, 1885.) (T.) Pure white under glass, taking on a delicate pink tinge out of doors. Forces well and produces abundantly for cut flowers.

Helen Good (Good & Reese, 1906). This rose is a true Cochet, being a sport from the pink Cochet. Mr. Joe Campbell, of the Highland Floral Co., says: "It is the best bedding rose of all the varieties we grow." The color is a delicate yellow, suffused with pink, each petal edged deeper; very chaste and beautiful. The color, with its immense size and exquisite form, makes it without question the greatest tea rose ever introduced, and we are proud to have brought it out. Be sure and try it. A genuine Cochet. We are receiving letters every week praising this rose as being a wonder. It grows, it blooms, and there is nothing finer.

Lady Hillingdon. (Lowe & Shawyer, 1910.) At the Detroit rose show in January, 1912, this was awarded the sweepstakes over all yellow roses. It has long willowy

stems that are in no sense weak, as the buds are held upright; has a long slender pointed bud of brilliant deep golden yellow, and a striking peculiarity of this rose was that each day of the show this golden-yellow color became deeper yellow and more intense, unlike all other yellow roses with which we are familiar, as invariably the tendency after being cut is to get lighter in color.

Mademoisesse Blanche Martignat (Gamon, 1904). Like so many of the good continental Roses, we just happened to have the good luck to run onto this superior Rose by chance. Why it has been neglected so long is beyond our comprehension. The only solution to the question, 'lost in the shuffle,' is probably the appropriate answer. Growth free and the foliage is quite distinct both in shape and color. The shape is extremely long and pointed. It has a distinct light silvery color. The flowers are beautiful peach-pink, with tints of yellow and crimson, the same colors as seen in the Aurora Borealis.

Madison (Brandt Hentz, 1912). This is the "money maker" among the cut flower Roses, and is a greatly improved Bride, and when we say improvement, we mean a genuine improvement. The best feature of Madison is that the foliage does not mildew. All know how badly the Bride mildews. Well, Madison is mildew-proof. Then after being planted and well established, Madison will cut as many flowers as Killarney, cutting steady each month in the year. Madison is a grand addition



Madison

to our list of forcing Roses. Remember, that "Madison" is the money maker.

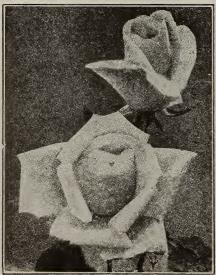
Mademoiselle Cecile Berthod (Guillot, 1871). Deep golden-yellow with a very pronounced tea fragrance.

Mademoiselle Franzisca Kruger (Nabonnand, 1880). Variable; sometimes deep golden-yellow with copper shades, then again yellow flushed rosy-pink.

Maman Cochet (Cochet, 1893). This is the famous Pink Cochet. Light pink shaded with salmon-yellow outer petals splashed with bright rose; extremely large and full; fine for cut flowers.

Mrs. George Shawyer (Lowe & Shawyer, 111). This variety is a wonder for freedom of growth and bloom. No other forcing Rose can touch it on these two points. It throws up strong breaks in rapid succession, and a bench soon shows dense growth, every shoot tipped with a bud. The color is bright peach-pink and is carried on three and four-foot stems. This Rose has won awards every place shown, and in the past two years it has been exhibited in practically all the shows, especially in the East and abroad. Rose has made a record the past season that its introducers should be proud of. You will make no mistake to plant Shawyer. From the point of quality and production easily the peer of any pink forcing Rose. Will be planted heavier than any other pink Rose and is destined to displace some of our old favorites.

White Maman Cochet (Cook, 1897). A sport from Maman Cochet with creamywhite flowers, faintly tinged with blush;



White Maman Cochet

long and pointed buds opening to large flowers; an exceedingly pretty and valuable variety that can be highly recommended.

William R. Smith (Shellum, 1908). The soft blending of the salmon-pinks and the rose-pinks and the beautiful flesh tints in this Rose give it a singular resemblance to the entrancing flush on a maiden's cheek. It ranks next to Helen Gould as a bedder.

Tender Climbing Roses Newer Varieties

These Roses are suitable for planting in the Southern States and on the Pacific Coast. All have beautiful flowers.

Aline Schneider (Nollent, 1909). (C. T.) A fine climber. Canary-yellow with deep golden-yellow center. Its clear golden color gives it a place that is quite its own. Bloom large and double; sweetly scented.

Climbing Gruss an Teplitz (Storrs & Harrison, 1911). (C. C.) An excellent counterpart of the bush form of that superb Rose, Gruss an Teplitz, except that it is a vigorous climber. A perfect sheet of dazzling crimson when in bloom.

Climbing Helen Gould (Good & Reese, 1912). (C. H. T.) Probably no red Rose has held its place secure in the hearts of Rose lovers for so long a period as has the beautiful Helen Gould. We have now the pleasure of introducing this famous Rose in climbing form. Everybody is familiar with the warm watermelon-red color of its charming flowers. This is a grand climber. Be sure and try it.

Climbing Liberty (W. Paul & Son, 1909). (C. H. T.) A climbing form of Liberty. Color brilliant velvety crimson, flowers of good size and beautifully formed; a superb variety for any purpose, the blooms lasting well when cut; very free flowering. When you see this dazzling rich Rose you will never forget it.

Climbing Richmond (Alex. Dickson, 1912). (C. H. T.) In all respects except growth identical with the normal type, from which it originated. The growth is most vigorous and of true climbing character. On account of its unique color and free flowering habit, it is an important addition to the climbing rose section. Color, pure rich scarlet.

Climbing White Maman Cochet (Needle. 1911). (C. T.) If there is one Rose that stands out in the affections of the people more than another it is White Maman Cochet. We grow many thousand more plants of White Maman Cochet than any other variety. Here we have a climbing

form that will become as popular a climber as its parent has as a bush Rose. Grand, huge white flowers tinged pink.

Pink Pearl (Hobbies, 1913). (C. H. T.) Shell-pink enlivened with salmon; petals are very large and of great substance. A fine climbing Rose, being a fine autumnal bloomer. Award of merit, unanimously, Royal Horticultural Society.

Tree Roses

The Tree Roses are grafted on hardy Rose stalks four to five feet high, and when in full bloom are objects of heauty, making handsome plants for the lawn or Rose border. In this shape we offer only the Hybrid Perpetual and hardy classes. We have them in white, the different shades of pink, red and crimson. Fine, strong trees that will bloom nicely the first year. These can only be sent by express or freight.

Baby Rambler Tree Rose. A most attractive novelty in hardy Roses. Budded on strong, straight stems four feet high; the round bushy Baby Rambler tops at all times a perfect mass of crimson bloom. The most florescent of all Tree Roses.

Moss Roses

These are probably a sport of the Cabbage Rose. The origin of the double Moss Rose is left to conjecture. They have always been favorites, for what can be more elegant than the bud of the Moss Rose and more delicious than its fragrance. Perfectly hardy.

Elizabeth Rowe (Rowe, 1866). This is an old favorite with its large deep pink buds well mossed. A beauty.

Henri Martin (Portner, 1863). Large full flower of deep red; well mossed; fragrant.

Mousseline (Robert and Moreau, 1881). Pure white flower, buds heavily and beautifully mossed.

Princess Adelaide (Laffay, 1845). Deep blush-pink with buds that are thoroughly mossed.

Dahlias

No garden is complete without a variety of these stately autumn flowers. No tubers give such a show of flowers with so little expense. In planting select a well drained position where they will receive the benefit of the sun the greater part of the day. The soil should be worked deep and add a liberal application of stable

manure. Your choice of colors: Red, scarlet, white, pink or yellow.

Abbreviations used: C., Cactus; D., Decorative; S. Show.

Delic (D). Very valuable for cutting on account of its firm substance, lasting qualities and good stems. Flowers are full and perfectly formed; a soft rose-pink.

Frank Smith (S). Good form, dark marroon, tipped white. Sometimes comes clear red. Long stems, free blooming and popular.

Henry Patrick (D). A splendid pure white, very large and gracefully perfect. A strong, robust grower and always dependable.

Jack Rose (D). This is an ideal comparison to the celebrated Jack Rose. In form resembles the rose, and in color identical. Was much admired in our field the past season. Very free. Fine for decorative work.

Kriemhilde (C). A pleasing variety, bearing dainty flowers of fresh delicate pink, shading to deep rose pink. The center petals ultimately changing to creamy white, give the mature flower a captivating pink and white effect.

Mixed Dahlias. Varieties in which stakes have been lost, all good varieties.

Perfection (S). Immense size; canary yellow, a magnificent sort; very free flowering and showy in the field or garden; a perfect form for cutting.

Standard Bearer (C). A gold mine for the florist. Bright scarlet, perfect type. Prodigious amount of bloom; good stems; early and late.

Cylvia, or Dolly (S). Fine for cut flowers, for which it is largely used, clear pink, almost white in center; free bloomer, extra fine.

Víctor (S)... This Dahlia is full double, of dark red; petals quilled to the center, some comes with open center, with broad petals, like the Decorative type, and we are sure if once tried, you will never be without this grand and noble Dahlia in your garden.

Cannas

(For Spring Planting Only)

Nothing gives a more showy effect at so small a cost than a bed of Cannas. We have described the varieties in height, color of foliage and color of flower. By planting the tall growing varieties in the rear and the other sizes in order, or by planting the tall growing kinds in the center of a circular bed and the lower growing kinds in the outer circles, a wonderful effect is produced. Each, 10 cts; per doz. \$1.00. Mailing weight, per doz., 1 lb.

Duke of Mariborough. One of the darkest flowered Cannas grown. Rich crimson maroon. 5 feet.

Brandywine. Large trusses; flowers cherry-red, boldly dappled with crimson. Dark foliage heavily ribbed and margined chocolate. 4 feet.

Burbank. Very rooty and vigorous; color lemon yellow, thickly spotted in the throat with bright scarlet. 6 feet.

Firebird. A magnificent variety of medium height, even growth, erect stems, very wide petals and mammoth trusses. Its color is pure scarlet without suffusion or spotting of any kind, vividly bright and dominating.

Gladiflora. A beautiful novelty among the Cannas, both in form and color. Large spikes are made up of numerous small, cup-shaped flowers with overlapping petals, compactly hugging the stem—like a Gladiolus. The color arrangement, which is nearly alike inside and out, consists of a rich, golden-yellow ground, the upper half of each petal being occupied by a solid blotch of most vivid scarlet within an irregular gold band. $2\frac{1}{2}$ to 3 feet.



Canna

Hungaria. The ideal pink bedder; with large trusses of perfect flowers, colored very similar to the superb Paul Neyron Rose. This is one of the most attractive Cannas on our grounds; and on account of its unusual color and showy appearance, should prove a valuable sort for the florist. 3 to 4 feet.

Indiana. A new sort of the orchidflowered class; soft orange lightened by flecks of gold, penciled and slightly margined with deep rose. 6 feet.

Italia. Orchid flowered; crinkly petals of clear yellow, irregularly overlaid with varied shades of orange scarlet. 5 feet.

Special King Humbert. The grandest Canna ever offered. Large, heart-shaped leaves of purple madder brown over bronze, the dark ribs sharply defined, crowned with immense heads of Orchidlike flowers. Individual petals are of the largest size; velvety orange-scarlet flecked carmine; rose tinted at margin and base. A combination of leaf and blossom incomparably beautiful. 4 to $4\frac{1}{2}$ feet.

Mrs. Kate Gray. Orchid flowered; deep orange delicately shaded carmine, with distinct dotted yellow throat. 6 feet.

Caladium Esculentum, or Elephant's Ear. One of the most beautiful and startling ornamental foliage plants in cultivation, either for culture in large pots or tubs, or for planting out on the lawn. Will grow in any garden soil, and is of the easiest culture. When of full size it stands about five feet high, with immense leaves, often measuring four feet in length by two and one-half in breadth. Smooth, of bright green color, beautifully veined and variegated with dark green. The roots should be preserved in dry sand in the cellar during winter, out of danger from frost.

Tuberoses. One of the best known and most easily grown summer flowering bulbs. Easily recognized by its exquisite fragrance and beautiful flower spikes, which are borne on long stems, making it an admirable cut-flower for house decoration.

Gladiolus

(For Spring Planting Only)

These bulbs are probably the most popular of all the summer flowering bulbs and the most easily grown. By planting a few every two weeks a succession of flowers may be had from July to frost. We can furnish in colors as listed below, so that you can arrange your planting to follow out any color scheme wanted. By cutting when the first buds open you may have cut flowers for a week to ten days

as all of the buds will open in order. We find it better to plant in the open and cultivate thoroughly and use for cut flowers rather than for yard planting. In the fall dig before frost and store the same as potatoes. Plant the following spring. The first cost is the only one.

America. Beautiful, soft flesh-pink (much like "Enchantress" Carnation), faintly tinged with lavender. Spikes develop very evenly and to unusual length, sometimes with two or three branches. A magnificent cut-flower; it took the flower loving world by storm when first introduced and holds undisputed first place among all Gladioli, with unabated popularity.

Augusta. Lovely pure white with blue anthers.

Blanche. Almost pure white; a superb variety.

Florists' Mixture. A hybridization that gives one of the richest color effects that we have ever had. The flowers are large and of fine color and particularly pleasing for cut flowers.

Klondyke. Rather dwarf growth, but very desirable as one of the earliest yellows. Pale primrose yellow with crimson maroon blotch on lower petals.

Mrs. Francis King. A fine strong growing variety with large spikes of showy flowers. Color a bright shade of pure scarlet.

Nezinscott. Bright blood scarlet, with deep velvety crimson-black blotches and white mottling in the throat.



Gladiolus

Princeps (The Amaryllis Flowered Gladiolus). Rich crimson with white blotches across the lower petals. The flowers open out wide and perfect and are of monstrous size.

Rosella. A beautiful white throated variety, light rose stained with purple.

Scarsdale. Tall growing and free blooming. Large flowers, pink-lavender, shaded to dark rose.

Ornamental Trees

Acer-Maples

Acer Negundo (Box Elder). A fine, rapid growing tree, with handsome, light green foliage and spreading head. Desirable for street tree and succeeds where many others varieties will not thrive. Particularly adapted to dry and barren soils.

Acer Dasycarpum (Soft or Silver Maple). One of the quickest shade trees and one of the best. Easy to transplant. A good street tree and excellent for lawns. It makes a dense shade with a regular well formed top. Where a quick dense shade is wanted, no other shade tree will give the desired effect more quickly.

Acer Platanoides (Norway Maple). A native of Europe. Strong, compact and vigorous. One of the best ornamental trees for street, lawn, park or cemetery planting. It resembles the Sugar Maple but is a quicker growing tree.

Acer Platanoides variety Schwedleri (Schwedler's Purple Maple). Of the same habit of growth as the Norway Maple, but with purple foliage early in the spring. Color changes to green later in the summer. Very desirable in early spring on account of its foliage.

Acer Saccharinum (Sugar or Rock Maple). The most popular of the shade

trees throughout the United States. Grows to height of 50 feet and over with a compact dense head. Foliage a bright green, turns to a rich scarlet in the fall. Very hardy.

AILANTHUS Glandulosa (Tree of Heaven). A rapid growing, lofty tree with long elegant foliage. Gives a tropical effect. Withstands smoke and gasses of the city streets well.

Wier's Cut Leaved. A silver Maple with remarkable and beautifully dissected foliage; shoots slender and drooping. Of rapid growth; it makes a large tree if undisturbed, but will bear any amount of pruning; adaptable to small lawns.

CATALPA Speciosa. Especially desirable in semi-arid regions where the propagation of trees is difficult. It is easily grown and makes a compact dense shade, while the timber is particularly valuable for posts, telephone poles, etc. The tree is very handsome in June, while in bloom, when it shows a great profusion of white flowers on long panicles.



Silver Leaf Maple



Catalpa Bungei

Catalpa Bungei. The most effective of the dwarf foliage trees for lawn planting or for cemeteries and parks. Budded on Catalpa Speciosa at 5 to 8 feet, it makes a globular head, very dense and compact. It is rarely attacked by any insects, grows readily and regularly, and is very desirable.

BETULA ALBA (European White Birch). "Most beautiful of trees, the lady of the woods." Very silvery foliage, with white bark. The foliage makes it desirable in summer, while the white bark is pleasing both in summer and winter after the foliage is gone.

Betula Alba var. Laciniata Pendula (Cut Leaf Weeping Birch). Very delicate cut foliage. Limbs very willowy, giving the tree, even while young, a very graceful effect. Bark white.

CELTIS OCCIDENTALIS (Hackberry or Nettle Tree). Particularly recommended by the Kansas State Agricultural College for the western part of the state on account of its hardiness. It grows readily, where most other trees will not survive. Thrives everywhere and has few insect enemies.

QUERCUS PALUSTRIS (Pin Oak). This we think the best of the Oaks for lawn or street planting. Foliage a deep green. While the tree is not a fast grower, it is very hardy. It is well worth your while to have a few of these coming on.

Populus—The Poplars

Populus Nigra Fastigiata (Lombardy). A very tall growing tree used for sky-line effect. Special prices on application in quantity.

Populus Molinifera (Carolina). Largely planted for its quick effect. Grows very rapidly. Often planted alternately with slower growing trees, to give shade until the others have attained some size when they are cut out. Special prices on application in quantity.

Populus Alba Bolleana (Bolle's Poplar). Tree is pyramidal in form, leaves dark green on upper side, silvery white beneath. Habit of growth resembles the Lombardy.

Volga Poplar. Resembles the Lombardy, but is hardier and does not blight so badly. This variety is gradually superseding the Lombardy.

Norway Poplar (Sudden Saw-Log). So called on account of its very strong, vigorous growth. Much resembles the Carolina, but holds its foliage later in the season.

PLATINUS OCCIDENTALIS (Sycamore). One of the most valuable trees for the Middle West. Rapid growing. Very hardy.



Weeping Mulberry

MORUS var.

Tartarica Pendula (Tea's Weeping Mulberry). A very graceful and beautiful weeping tree. Should be planted as a specimen tree. Adapted to lawns or cemeteries. Long, slender, willowy branches that droop to the ground.

Robinia Pseudacacia (Black Locust). Very tall growing and much used in the prairie states on account of its hardiness and longevity.

ULMUS

Americana (White Elm). Too well known to describe. The most popular of all the shade trees,

Evergreen Trees

ARBORVITAE

American, or White Cedar (Thuya occidentalis). One of the finest mediumsized evergreens for screens or hedges. It is very hardy, there being very few places where it will not thrive. It bears shearing better than any other variety and may be made to grow into almost any desirable form. More extensively planted than any other.

JUNIPER

Virginian (Juniperus Virginiana). This is the common well-known form of Red Cedar. It is usually compact and conical; very hardy and grows in unfertile places.

White (P. Strobus) A grand old favorite and the most ornamental of all our native Pines. The foliage is light, delicate or silvery green. It withstands hardships and grows in the most barren soils.

Mountain, or Dwarf (P. Mughus). Forms a dark dome-shaped bush broader than its height and sometimes almost prostrate. Leaves short, stiff, a little twisted and thickly distributed over the branches. Fine for lawn specimens or evergreen groups.

SPRUCE

Norway (Picea excelsa). This familiar Spruce is more generally useful than any other variety. It is a lofty tree of pyramidal habit and very elegant and rich. With age it has fine, graceful, pendulous branches; very popular as an evergreen hedge. Is very picturesque and beautiful.

Colorado Blue (P. pungens glauca). This Spruce has been tested through the West and Northwest with perfect success, enduring a temperature of 30 degrees below zero in exposed situations without injury. It is also beautiful in color and outline, the foliage being of a rich blue or sage color. Makes an ornamental tree of great beauty.

Hemlock, or Weeping (Tsuga Canadensis). A very graceful and beautiful native tree, with drooping branches and delicate dark foliage, like that of the yew. Distinct from all other evergreen trees. Valuable as a lawn specimen; no other evergreen is better adapted for hedges.

Glacious (Red Cedar). Is very desirable on account of its distinct, compact conical habit, and its silvery foliage.

Irish (J. Hibernica). Very erect in its growth, forming a dense, conical outline which resembles a pillar of green. Is very useful in formal plantings.

Savín (J. Sabina). A low-spreading tree, with dark green foliage. Very valuable for rockeries, groupings and borders, contrasting with other low-growing trees.



Colorado Blue Spruce

PINE

Austrian, or Black (Pinus Austriaca). A tall massive species from the mountains of Syria; the branches are spreading, with long, stiff, dark green leaves. Very hardy.

Scotch (P. sylvestris). A native of the British Islands. Its rapid growth makes it suitable for screens and shelter-beds. Bluish foliage and ragged shoots. Thrives even on the poorest soils.

Forest Tree Seedlings

APPLE Seedlings-No. 1; No. 2.

ASH, White-18 to 24 in.

ELM, White-18 to 24 in.; 2 to 3 ft.

CATALPA Speciosa—12 to 18 in.; 18 to 24 in.; 2 to 3 ft.

OSAGE ORANGE—12 to 18 in.; 18 to 24 inch.

BLACK LOCUST—12 to 18 in.; 18 to 24 in.; 2 to 3 ft.

MAPLE, Soft—18 to 24 in.; 2 to 3 ft.

RUSSIAN MULBERRY—12 to 18 in.; 18 to 24 in.

WHITE WALNUT-

List for Hedges

Deciduous

Honey Locust

Tamarix Amurensis

Russian Mulberry

Osage Orange

Privet Amurensis

Barberry, Purple Leaf

Barberry, Common

Spirea Van Houtte

Spirea Thunbergii

Evergreen

Arbor-Vitae

Black Hills Spruce

Norway Spruce

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Treatment of Trees, Etc., That Have Been Frozen In Package or Received During Frosty Weather

Put them unopened in a cellar, or some other cool, protected place free from frost, or cover them up heavily and completely with earth until they are entirely thawed out, when they can be unpacked and planted or placed in trenches until convenient to plant. Treated in this way they will not be injured by the freezing.

Spraying Machinery.—The size of the spraying outfit needed depends on the size and age of orchards. High pressure is essential for effective work in all cases. While this may be obtained with high-grade hand-power outfits, it is slow and hard work to maintain the pressure. For small orchards containing up to 100 or 200 trees, however, this kind of an outfit can be made to do satisfactory work. But for larger orchards gasoline power outfits are recommended. These are now manufactured in several sizes, but all maintaining the same high pressure. The prices range from about \$100 up to complete outfits. These are assembled in such manner that the engine may be easily disconnected and be used throughout the year for pumping water and other light work about the farm, making the actual extra cost for the pumps and other equipment little more than for the best hand outfits.

In some sections power machines are owned jointly by several orchard owners and the same machine sprays all orchards. Such machines are also owned and operated by individuals who spray for their neighbors like the practice with threshers, shellers, etc.

If interested in a spraying outfit advise us and we will place you in touch with manufacturers of good machines.

Other Sprays and Their Uses

Kerosene Emulsion—Kerosene in its natural, undiluted state, is fatal to all insect and vegetable life, but properly prepared may be used safely and with much benefit.

Dissolve a bar of Ivory soap in one gallon of hot water, then add two gallons of kerosene and churn it vigorously until cool. If made right, it is then like cream, and will keep indefinitely. For general use, take one part of the mixture to ten parts water and use as a spray. Will be found very valuable in getting rid of aphis, mealy bugs, red spider, etc. May be used against any soft-shelled insect.

Copper Sulphate Solution—Copper sulphate, one pound; water, 15 gallons. Dissolve the copper sulphate in water, when it is ready for use. This should never be applied to foliage, but must be used before the buds break. For peaches and nectarines use 25 gallons of water. For fungous diseases.

Hellebore—Fresh white Hellebore, one ounce; water three gallons. Apply when thoroughly mixed. This poison is not so energetic as the arsenates and may be used a short time before the sprayed portions mature. For insects which chew.

Resin Compound—Sal soda (crystalized), four pounds; resin, eight pounds; water, one quart. Mix and boil until resin is dissolved, and while hot add water enough to make three gallons and boil a few minutes. Let cool and then add water to make five gallons. This is the stock solution. When ready to use it, dilute the stock solution, using one gallon of it to about seven gallons of water. This is for plant lice, either on outdoor plants or house plants. On the latter it may be washed off the leaves after it has killed the insects attacking them. Does not injure the most tender foliage, cucumbers, melons or peaches. Used and heartily recommended by the University Farm at Lincoln, Nebraska.

If the above does not give satisfaction, then try Kerosene Emulsion, given at top of this page.

Tobacco Decoction—A spray for plant lice, etc. Steep the midveins or "stems" of tobacco leaves in an amount of water sufficient to cover them, and, when their strength is well drawn out, dilute the liquid until it has the color of fairly strong tea. Spray on the plants, taking care that the insects to be destroyed are reached by the decoction.

Commercial tobacco and nicotine preparations in concentrated form may be used. These give same results as above when diluted as per directions.